Assessment of LMX as mediator in procedural justice–organizational citizenship behavior relationship

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■ TECHNOLOGY OF EDUCATION

■ CHOSEN ASPECTS OF PSYCHOLOGY

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Editor's Preface

The third number of *The New Educational Review* in 2012 is the twenty ninth issue of our journal since the start of its foundation in 2003. In this issue there are mainly papers from: China, the Czech Republic, Iran, Kazakhstan, Malaysia, Pakistan, Poland, Romania, Serbia, the Slovak Republic, Slovenia, Spain, and Turkey because our journal is open for presentation of scientific papers from all over the world.

In the present issue the Editors' Board have proposed the following subject sessions: Social Pedagogy, Technology of Education, Pedeutology, Pedagogy of Health, Pre-primary Education, Social Work, Chosen Aspects of Psychology and Review.

The subject session "Social Pedagogy" consists of seven articles. The question of the impact of the processes of the formation of the Common Economic Space, the Euroasian Union on different sectors of the economy, particularly in the system of the higher education of Kazakhstan in the context of international experience in this field are analysed in the article by Mukhit Sydyknazarov. The aim of the research presented by Milica Andrevski and Jasmina Arsenijević was to connect leadership characteristics and skills of school employees in Serbia with their personality dimensions. In their article Natasa Brancovic, Vesna Rodić and Svetlana Kostović determine indicators of school culture in primary schools and on this basis determine its level. The purpose of the study carried out by Sinan Yörük was to investigate the violent behaviours regarding as variables such gender, classroom and location of the school. In the article by Anna Waligóra-Huk her diagnostic results of research are presented concerning the occurrence of omnipresent physical and verbal aggression among students from rural schools. The study by Ingrid Emmerova analyses the rate of suicides committed by children and adolescents in the Slovak Republic. Special attention is paid to possibilities of prevention. In her article Małgorzata Biedroń characterizes the results of the level of parental involvement in leisure activities of their preadolescents children.

According to Ishtiag Ishaq and his co-authors scant literature is available on procedural justice – organizational citizenship behaviour via the mediating role of leader-member exchange in the higher education context especially in Asian countries like Pakistan. The aim of the study presented by Ramezan Jahanian and Banafshe Makhzan is investigating the factors affecting the self-efficacy of human resources in educational organizations. The purpose of the study by Engin Aslanargun is to train students to be sensitive to social issues and make them aware of the importance of social responsibility.

In the subject session "Technology of Education H. Zhang and Y. Shang describe the introduction of experimental methods into teaching of real estate economics. In his article Esteban Vázquez Cano presents research conducted in three secondary schools in the region of Castilla-La Mancha (Spain), where an interdisciplinary program was developed to improve linguistic competence through the use of Twitter as a communication tool. The study conducted by Denisa Labischová clarifies theoretical and methodological basis of historical consciousness among pupils, students and teachers in Czech schools and presents findings related to the following factors: interest in history, preferred sources of information about history, subjective evaluation of influences determining the development of human history, and respondents' concepts of historical development. The paper by Biljana Cvetić and Dragan Vasilievíć focuses on the selection, application and evaluation of games suitable to enhance teaching and learning processes in two courses related to the logistics and supply chain management at the Faculty of Organizational Sciences, University of Belgrade. The investigation of to what extent high school students are information literate and what are the factors that influence the level of students' information literacy are the subject of an article by Dragan Grahovac, Dijana Karuovic, and Branislav Egic. The studies carried out by Huam Hon Tat, Muhamad Jantan and Amran Md Rasli use the self-regulated learning and Tinto's model to explain the relationship between academic performance and student satisfaction in a public university in Malaysia. The article by Tomasz Huk reveals research findings concerning opinions expressed by teachers of Polish junior schools about the use of mobile phones in education. The study carried out by Sevinç Mert Uyangör determines the effects of Project-Based Learning Approach in teaching of "Polygons and Plane Geometry" unit on 9th grade students' achievements, attitudes and views about the implementation.

In the subject session "Pedeutology" we publish three articles. The purpose of the paper by Ahmet Aypay, Ali Taş, and Adnan Boyaci is an investigation of the school climate in elementary schools. Vlasta Hus wants to establish how teachers evaluate the representation of some constructivist elements in the selected textbook

sets for the environmental studies subject. The article by Magdalena Kleszcz and Małgorzata Łączyk includes research results that were taken into consideration in order to diagnose beliefs concerning values disclosed by academic teachers and the youth studying in education majors.

Milena Lipnická in the subject session "Pre-primary Education" presents the results of an analysis of national educational programmes in pre-primary education in three neighbouring countries – in the Czech Republic, Poland and the Slovak Republic.

In the subject session "Pedagogy of Health" Ewa Wysocka and Joanna Góźdź present correlations between authoritarianism and the views on rehabilitation from the classical perspective by T. Adorno. The aim of the research conducted by Monika Guszkowska and Anna Kruk is to determine the health locus of control of undergraduates of Józef Pilsudski University of Physical Education in Warsaw (Poland).

The subject session "Social Work" contains one article by Maciej Bernasiewicz, who characterizes a symbolic interactionism perspective in the social rehabilitation theory and clinical social work.

In the subject session "Chosen Aspects of Psychology" we publish two articles. Mariola Chomczyńska-Rubacha and Krzysztof Rubacha report on the findings of a study on the empirical verification of the hypothesis regarding a stronger impact of gender over sex on coping with stressful situations. The study presented by Jacek Gralewski, Ewa Weremczuk, and Maciej Karwowski is devoted to the examination of the threshold hypothesis, which assumes a curvilinear relation between creative abilities and intelligence.

In the subject session "Review" we publish one review. Maciej Koniewski presents a review of a book by Ian Menter, Dely Elliot, Moira Hulme, Jon Lewin and Kevin Lowden, entitled "A guide to Practitioner Research in Education", published by SAGE in 2011.

We hope that this edition, like previous ones, will encourage new readers not only from the Middle European countries to participate in an open international discussion. On behalf of the Editors' Board I would like to invite representatives of different pedagogical sub-disciplines and related sciences to publish their texts in *The New Educational Review*.

Social
Pedagogy

Mukhit Sydyknazarov
Kazakhstan

The National System of Higher Education and Science of Kazakhstan in the Context of the Formation of Common Economic Space of Belarus, Kazakhstan and Russia: Challenges and Prospects

Abstract

Effective participation in regional associations is a necessary condition for the functioning of a modern state and the tools of implementation of economic and political interests. The questions of the impact of the processes of formation of the Common Economic Space, the Eurasian Union on different sectors of the economy, particularly in the system of the higher education of Kazakhstan in the context of international experience in this field are analyzed in this article.

Key words: *higher education, export of education, Eurasian Union, Common Economic Space of Russia, Kazakhstan and Belarus, competitiveness.*

Introduction

Any integration processes are always accompanied by increased competition in the markets, which in the conditions of the CES will be shown in the sphere of science and higher education, when qualified scientists, prepared applicants are turned there, where better, more attractive conditions are created for the organization and holding of research work and education. The specified effect will be visually shown in the processes of exporting education and parallel to facilitate the process of "brain drain".

The processes of integration of Kazakhstan into the CES will be accompanied by an increase in tendencies of leaving to receive higher education (training on

a full cycle, student exchanges, etc.) and carrying out research in the EEA member countries. A significant place in the stream of leavers will be young researchers, as the most mobile part of the scientific community, which contributes to the process of "brain drain". From the economically developed countries the process of recruitment of staff arriving by prospective researchers from third world countries, which remain in the country to a greater extent of the number of foreign students who studied there (bachelors, masters, doctoral students, interns) is stimulated at the state level.

And although the exporter-countries of education declare in the capacity of the humanitarian purposes well-known categories « internationalization of education», «distribution of the European/Eurasian values», in these processes purely political-economic interests appear in the forefront.

In the process of export of educational services as a highly profitable industry with a multi-billion turnover there is unambiguous separation of the subjects of such exports to the importing countries and exporting countries: more developed countries have hosted more foreign students than sending abroad of their own students.

Kazakhstan's higher education institutions, regardless of ownership, will powerfully feel the pressure of competition and the need for finding appropriate institutional solutions that will give an opportunity to strengthen their position in the scientific and educational market.

It is important to take into account that all these processes are a massive migration flow, which a priori cannot and must not be beyond the interests and priorities of the state policy of Kazakhstan, or outside the regulatory framework established for their regulation.

As far as the higher education and science of Kazakhstan is ready for such integration, what are its prospects within the Common Economic Space (CES)?

Discussion

Export of higher education in the context of the Common Economic Space of Kazakhstan, Russia and Belarus

According to UNESCO, the export of higher education in the 21st century will be one of the most profitable branches in the structure of the export of goods and services in leading smart economies, where knowledge is the main factor of growth.

This is a highly remunerative market, measured by billions of cash and long-term impact, as formed in "importer" countries entrants cohort of people, brought up

on the values of the country where they were taught, conducted their research, etc. It is necessary to take into account accompanying effects for the country, providing scientific and educational services –it is multi-million dollar revenue into the economy of the host country from residence, food, language and other courses of adaptation. The total economic and political effect of the export of education is enormous.

For example, in the leading exporter countries of education (the USA, the UK, Australia, Japan, and also the EU – Germany, France, Finland), their efforts of using foreign graduates for developing the economy and science of their countries are stimulated at the governmental level, in the European Union – by special programs of the European Commission (Green Paper – 'Migration & mobility: challenges and opportunities for EU education systems'). Thus, the EU introduced a system of a "blue visa" for talented scientists from all over the world, including the post-Soviet countries. "Blue visa" is a system of social support, operative reception of a visa, by wish – citizenship for young talented scientists from non-European countries.

Finland intends to increase the export of educational services in Saudi Arabia, China and Malaysia, and designates 5–6 years for the purpose of increasing the share of income from the export of education to 20% of its annual education budget, as the Finnish government plans to cut university funding to 80%.

According to the State Program of Development of Education in the RK before 2020, in Kazakhstan there are 148 universities (9 national, 2 international, 32 state, 12 non-civil, 93 private, including 16 incorporated), in which over 595 thousand people are trained. As we can see, the number of universities per capita is one of the highest in the world (1 university on average for 112 thousand people, on average there are 4,000 students trained in 1 university in the Republic of Kazakhstan, which demonstrates a high level, comparable in European countries only with Poland, where in 457 universities there are about 2 million people enrolled). State educational order for training personnel with higher education and postgraduate education increased from 25,710 in 2005 to 35,425 in 2010. The number of students who want to receive a higher quality education grows. About 3000 scholars of the international grant of the President of Kazakhstan, "Bolashak," are trained in 27 countries of the world, and the structure of grants under the program "Bolashak" has undergone change, moving from grants to all levels (bachelor-master-doctorate PhD) to 100% study abroad only on master programs, doctoral studies, on scientific training, in a bachelor degree – from one semester to one academic year.

Economic axiom: demand creates supply. With the export of education not only strongest higher education institutions are connected, but also weak universities,

a great number of private pseudo-universities for which activities in the educational market are only "educational games". Such "universities," which have been founded in the period of the formation of market economy, have appeared in the northern neighboring country of Kazakhstan also in a large number. While in Kazakhstan, this matter did not wait for the processes of "evolution" of non-state institutions at the price of a tangible splash of, frankly speaking, low qualified experts who were prepared not by all, but nevertheless the majority of them, and under the pressure of public opinion profile ministry followed the way of hard regulations, closing, withdrawing licenses, or giving them an opportunity to unite with the more powerful, or providing to " middling" ability to provide educational opportunities in the status of college, not as institutions of higher education, the situation of the partners of Kazakhstan in the CES – Russia and Belarus – has not been adequately analyzed by Kazakhstan's experts.

Kazakhstan has had sufficient initial conditions for increasing competitiveness in the educational market and to be more actively involved in the processes of its exports, and in some areas certain benefits (multilingualism of the main part of the population and scientific and academic community, 100% literacy of the population, one of the highest level of scalarization in the world in higher education, the dynamic economic development, political stability, interethnic peace and inter-denominational tolerance, lack of xenophobia, security, and many others). Despite this, Kazakhstan in recent years has not invested the aforesaid in the export of education at the initial stage even to the states of Central Asia, although in the cultural, linguistic and mental plan they are very close countries to Kazakhstan. Unfortunately, declaring the leadership in Central Asia, Kazakhstan has not become a leader in this field, without becoming a country of arrival, even in the region. The opportunities in this direction have been lost for the last years. There are separate precedents, but at mass level, they are not observed. Talented scientists and young specialists from Central Asian states have not studied or worked in mass order in Kazakhstan. And the reason is not so much that the strategic vision is not developed, but the fact that on mental-psychological level, heads of organizations of science and education are not ready for it.

Representatives of the CES noted that Kazakh universities every year become more attractive for students from Asian countries (if in 2005–2006 academic years in the country there were registered nearly 9.1 thousand students from 30 countries, in 2009 their number had already amounted to 10.5 thousand people from 49 states, mostly young people from Uzbekistan – more than three thousand people, China and Russia – more than two thousand people, Kyrgyzstan and Mongolia – more than 500 people, and Turkey – more than 400 people, Pakistan

and India – 300 people) (Karimova D. 2009). However, these figures (as of 2009) do not correspond to the potential of Kazakhstan's higher education.

And although it is difficult to affirm that Kazakhstan's students, in the conditions of openness of world scientific and educational space of Kazakhstan, when Kazakhstan citizens over twenty years of independence have successfully studied in American universities, the European Union, Australia, Southeast Asia and at all levels of higher and postgraduate education, will "rush" in the universities of Russia and Belarus, nevertheless, for Kazakhstan's citizens besides North American and European (main) and Asian (South Korea, Japan, Singapore, Malaysia, China, etc.) now within the CES the doors of Russian and Belarusian universities will be open wider.

In terms of educational legislation between the countries of the CES, there are bilateral / group agreemens, which stipulated the provision of equal rights for citizens of one country in another when it comes to educational institutions, e.g., between Russia and Belarus, the RF and RK.

Russia, at the present stage considering export of education as part of its foreign policy, is pursuing the geo-economic and geopolitical goals, having developed an appropriate strategic document for this purpose, "The concept of the exporting of educational services of the Russian Federation for the period of 2011–2020."

Thus, in this concept the developers clearly indicated that "strengthening the international position of Russia …ensuring the political, economic, informational, and cultural influence abroad requires the inclusion of all available instruments of the state. Policies directed on internationalization and development of export of Russian education are an important tool for the implementation of the key purposes of "national policy" (The Concept of the Export of Educational Services of the Russian Federation for the period of 2011–2020).

Russian strategists from the sphere of science and education intend to actively develop all forms of export of educational services, which in the Concept they have given the definition of "cross-border supply," i.e., distance learning of students at virtual universities, "the consumption of services abroad" – training of foreign students in Russian universities, "commercial presence" – opening of branches of universities or campuses abroad, and "the movement of natural persons" – the work of Russian professors in foreign universities.

Belarusian partners in the CES are also actively involved in the process of export. Thus, in continuation of the resolution of the Council of Ministers of Belarus № 1320 "about the concept of development of the export of educational services in the framework of cooperation between Belarus and foreign countries in 2007–2010" by 2015 it is planned to increase the export of educational services to $ 61.66 million,

and during the years of implementation of the state program – up to $ 186.68 million (from http://bdr.by/work/education/7642--2015–6166-). 6741 foreign citizens studied in Belarus in the 2006–2007 academic year. 5543 of them – are at full payment for their education. 56% of the total number of foreign students are citizens of foreign countries, and 44% – citizens of the Baltic and CES countries.

Interpretation of the results

The situation in Kazakhstan can be characterized as follows. Unfortunately, in spite of the fact that the State program of educational development of the RK until 2020 was developed and approved on December 7, 2010, on the eve of Kazakhstan's entrance to the Customs Union and the formation of the CES, we do not find in the document any items indicating that this has been taken into account, and how Kazakhstan's profile ministry sees the complex of scientific and educational processes of the export of education connected with it. Only the twelfth item identified in this specified document of purposes declared to 2020, "Increasing the share of education in domestic market, increasing volumes and structure of export of educational services of the educational system of the country." However, neither the plan was mentioned, nor the tools nor the mechanisms of implementation, etc.

But despite this, as well as the previous state program of education development for 2005–2010 has been already implemented, there are no strategic documents for the medium – or long-term periods in the form of concepts, programs for the export of educational services, etc. in the Republic. The stated problem is much broader, and its main aspects are:

- lack of Kazakhstan's strategy of promoting and protecting the interests of its market of higher education,
- lack of not only common as such, but generally any corporative position of Kazakhstan's higher education with respect to an increase in consumption of the export of educational services by Kazakhstan's people or plans of increasing the export base of their own education;
- corporate position of various kinds of associations and associations of the rectors of Kazakhstan on this issue is not determined, even in its infancy;
- organization for promoting Kazakhstan's market of higher education abroad as British Council (UK), EduFrance (France), DAAD (Germany), the Confucius Institute (China), CIMO (Finland), IDP Education Australia (Australia), NAFSA (USA), etc. is not created.

Export of educational services has not been one of the priorities of the educational policy of Kazakhstan yet, as we can see, although it is on the agenda of Kazakhstan in the conditions of the CES. What are the reasons? In our opinion, the

most important and fundamental reasons (all the rest are secondary and derived from them) for the observed inertia in the export of education of Kazakhstan are:

- lack of a national strategy of exporting education, vision or plan of action for medium and long term, underestimation of the geo-economic and geopolitical dividends of this type of activity as a result (high yield of exporting education, cumulative effect on other branches of the economy, humanitarian component – the formation of people friendly and loyal to Kazakhstan among future foreign intellectuals, promotion of the Kazakh language, culture, values and traditions of Kazakhstan, the growth of the quality of higher education, internationalization of education, increasing academic and research mobility, etc.);
- insufficient volume or absence of financing of the complex of measures, the necessary infrastructure and personnel that will be especially noticeable in the first years of international processes in the CES, when Kazakhstan is under the risk of becoming a 'sales market' for the services provided by third world countries;
- weak coordination of activity of all agencies and organizations in Kazakhstan involved in these processes (Ministry of Education and Science, Ministry of Foreign Affairs, Ministry of Justice, the National Academy of Sciences, the National Welfare Fund " Samruk-Kazyna ", National Center for International Programs "Bolashak" /"in Kazakh "Bolashak means "future"/, science and technology holdings, institutes of higher education, city halls, etc.).

In turn, the weak competitiveness of Kazakhstan's universities lies in the following:

- quality of higher education does not correspond to international standards, discrepancy of training programs to the inquiries of economy;
- low level of the reproduction of scientific and pedagogical staff, especially PhD-Doctors, aging of workers (average age – 55 years). The scientific basis for the reproduction of the intellectual potential in Kazakhstan is Master and PhD studies, replacing the old system, "PhD – Doctor of Science". There are about 500 PhD-students training in the RK at the moment. However, even increasing the number of PhD doctors up to 2,000 people, planned in the State Program of the development of education of the RK by 2020, does not solve the problem. Who will realize in that case the project of the formation of the intellectual nation, science intensive part of the program of innovation and the State program of forced industrial-innovational development of the Republic of Kazakhstan for 2010–2014? Who will work at the Research Institute and experimental design office? For comparison, in

Poland with a population of 39 million people in the 2009–2010 academic year there were 36,000 PhD-doctoral students, in the Czech Republic – with 10.2 million respectively 17,234 PhD-students. The proportions are incommensurable with us. So there is a need for an at least 7-fold increase in the number of seats on the state order in the PhD-doctorate, that is, up to 14,000–15,000 doctoral students;

- lack of a modern system of effective management, planning and infrastructure decisions in the management of higher education and scientific organizations;
- excessive levels of state intervention, excessive administrative control;
- still low salaries of the teaching staff of universities and researchers;
- inertia of academic traditions and the low prestige of the profession of lecturer and researcher in the community and, as a consequence, lack of a clear model of research and pedagogical career (even at the level of the statement of a problem). Public debates among the academic community about the need for building a clear and adequate model of scientific, pedagogical career, social elevator for scientists, which are arranged, e.g. in the European Union, have not been initiated in Kazakhstan yet. Meanwhile, the knowledge of what will be reached by the researcher and the teacher of a higher education institution when certain stages are achieved (the presence of ranks, degree, quantity and quality of publications) is an important factor for reliable alignment of their own career path and a clear, transparent vision of their future in this field. This is recognized by experts, the authors of "Human Development Report. Education for All: The main purpose of the New Millennium" (Human Development Report for 2004. Kazakhstan). A lot of effective programs are adopted in the European Union for solution of specified questions; among them are «European Charter for Researchers and Code of Conduct for the Recruitment of Researchers»;
- desire and aspiration to the autonomy of the university without taking on accompanying co-responsibility for the results of activity;
- low geographical and inter-sector mobility.

The output in this situation is seen by the following measures:

- The creation of state and non-governmental organizations, national services for the promotion of export of educational services and academic exchange of teachers and students, with branches abroad;
- Researching the effective practice of other countries in the export of higher education, training managers and marketers on education export;
- Developing a network of representative offices of Kazakhstan's science and

higher education, both on the basis of diplomatic missions and expanding network of Abay centers[1], with actualization of the concepts of their activities, with the revision and expansion goals of their activities in the regions of the CES and in foreign countries.

- Financial stimulation of campaigns for strengthening international attractiveness of Kazakhstan's universities by financing their participation in educational fairs and exhibitions and other events that produce such an effect;
- Expansion of geographical scope, priorities, and amount grants for foreign students at all levels (bachelor-master-doctorate) and scholarships for researchers;
- The maximum simplification of procedures for obtaining entry visas to Kazakhstan for foreign students (undergraduates, doctoral students, researchers, and others), increasing their length of stay in Kazakhstan;
- Increasing the number of English departments in universities;
- Stimulation of horizontal mobility of students and researchers within Kazakhstan.

Meanwhile, if over 30–35 thousand Kazakhstan's students study overseas, more than 14,700 learners among them (students, undergraduates, doctoral) are in the Russian Federation according to the MES as of December 2011. That is actually 50% of those already being trained abroad – they comprehend sciences (including research training program "Bolashak") in Russian universities and research centers. Naturally, it is promoted both by cultural and historical ties of both countries, and knowledge of Russian.

They bring with them not only knowledge and experience of the country of training and research, but also emotional attachment to the country of study, the vision of many important social and political, cultural and historical issues through the eyes of the country that provides services of higher education and science – all that will be the core of political opportunities of the "soft" power of Russia in the international arena by distributing their national values. And this is directly the issue of long-term, strategic character.

Russians have their own statistics of the number of training Kazakhstan's countrymen. The issues of education export in general and higher in particular,

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[1] The Abay center – a center of promoting the Kazakh language, culture and history, which works on the example of the German Goethe Institute, the Chinese Confucius Institute, British Council, etc.

occupy an important position in the Russian political-economic analyses, research on educational legislation.

Table 1. The total number of foreign citizens who used the educational services of Russian universities in the Russian Federation and abroad in the 2007/2008 academic year, by country of origin, the CES and Baltic countries

Countries	Full-time tuition in Russia	Tuition by Corre-spondence in Russia	Tuition in foreign affiliates, representatives, educational centers, joint and associated educational institutions of Russian universities	Total
Azerbaijan	2 450	1 726	1 949	6 125
Armenia	2 016	1 116	6 843	9 975
Belarus	2 595	11 243	9 574	23 412
Georgia (including Abkhazia and South Ossetia)	1 913	1 065	1 512	4 490
Kazakhstan	**13 540**	**9 791**	**22 267**	**45 598**
Kyrgyzstan	1 354	329	14 884	16 567
Latvia	488	413	324	1 225
Lithuania	509	603	689	1 801
Moldova (including Transdniestria)	417	1 836	7 501	10 754
Tajikistan	1 877	1 066	4 951	7 894
Turkmenistan	1 387	890	75	2 352
Uzbekistan	3 521	6 456	4 139	14 116
Ukraine	4 426	5 848	7 987	18 261
Estonia	271	243	46	560
Total	**37 764**	**42 625**	**82 741**	**163 130**

Source: Arefyev A.L. (2010): The trends of the export of the Russian education [Арефьев А.Л. Тенденции экспорта российского образования].

As shown in the Table, 36% of all citizens of the CES and Baltic countries, studying in universities of the Russian Federation are Kazakhstan's citizens, i.e. in fact, every third student from the CES and Baltic countries in all the forms of education in Russia is a citizen of Kazakhstan.

The total number of Kazakhstan's students who used the export of educational services in the sector of higher education in the Russian Federation in 2010 (bachelor, master, postgraduate study, classical doctoral studies, internship, clinical studies, etc.) was 45,598 people that, in turn, was:

1. adequate to the number of all students in Russian universities from Asian countries (from them – 45,541 students);

2.9 times greater than the number of students in the RF from Northern and Western Europe taken one in another (from them – 5,116 students);

3.9 times greater than the number of students in the RF from Eastern and Central Europe taken one in another (from them – 5,185 students);

4.7.5 times greater than the number of students in the RF from Sub-Saharan African countries taken one in another (from them – 6,818);

5.21 times greater than the number of students in the RF from the countries of Latin America taken one in another (from them – 2,200 students);

6.29 times greater than the number of students in the RF from North America and Oceania taken one in another (from them – 1,571 students).

Apparently from the provided data, the absolute leader among the consumers of the export services of the Russian higher education is Kazakhstan. Thus, it is clear that Kazakh students make a significant share in the structure of export of the Russian higher education, and it is necessary to think over the corresponding policy at a more qualitative level.

Let us remember that if earlier the Soviet Union occupied the second place (after the USA) in the number of foreign students, now Russia is on the 9th place in the number of foreign students. At the same time, the annual income of the Russian market of higher education by foreign students ranges from 150 to 200 million dollars, i.e. a partner of the CES, the Russian Federation, controls 0.5% – 1% of the global education market. The reduction of the proportion of students from developing countries (Asia, Middle East and North Africa), which was earlier traditionally a significant share in the export structure of the Soviet and then Russian education, is an evident confirmation of reducing the attractiveness of the Russian higher education abroad.

Conclusions

What can be expected in the medium term in this direction? It is clear that among the priority countries for partners in the CES in the export of educational services, despite a relatively small number of population (16.7 million), will be also Kazakhstan. The educational activity of Kazakh students is very high. The standard of living in the space of the CES is also one of the highest.

As the Russian researchers state: "The largest" educational field "for Russian universities outside of the Russian Federation for the past 15 years has been the

Republic of Kazakhstan, numbering over 10 million Russian-speaking citizens. The peak of Russian exports of educational services took place in the 2005/2006 academic year, when the total number of local students studying by Russian educational programs, amounted to 30 thousand people, according to account data, and the number of Russian universities, which exported to Kazakhstan their educational services, was 26, which was also a record" (Arefyev A. , 2010. p.117).

In our view, the observed trend will slowly, but still grow in the format of the CES, and over time more and more Kazakh youth will select Russian universities, despite the fact that Russia is not attractive either in terms of socio-economic development or the level of development of innovation-oriented production in comparison with the western countries – exporters of higher education. The attractiveness of the Russian system of higher education is considerably inferior to similar Anglo-Saxon ones (the USA, UK, etc.). Speaking so, we naturally do not mean the Russian flagship of higher education, as it is objectively necessary to recognize an existing huge gap between them and the bulk of Russian universities. The specified disproportion is also applicable to Kazakhstan's system of higher education.

For the last twenty years of independence, students from Kazakhstan have proved themselves positively in the world. They have a high level of training, at least – they are trilingual (fluent in the Kazakh, English and Russian languages + the language of the country of training), have expressed a capacity for foreign languages, communicative, tolerant, disciplined, respectful to the host country, solvent, and the most important – they show a high level of training in universities, for which they are deservedly in demand in higher education institutions of foreign countries.

There is no clear picture among the Russian experts of how, at the cost of what will increase the export base of education, to position oneself in this sharply competitive market? As a country with a strong higher education, or a country that can provide inexpensive diploma of higher education? Thus, the director of the Center of Economics of Continuing Education, Academy of National Economy under the Government of the RF, T. Klichko said: "We do not know why students come to us, e.g., in China there are very rigid rules for admission to universities after a single state exam. Therefore, we can assume that young people who cannot enter Chinese universities, go for education to Russia. Thus, the Chinese come to us for a cheap diploma, and the Kazakhs, having received money for training from their government, have ceased to come to our country. Generally, does Russia need the foreign students who are only interested in cheap diplomas? " (From the raw export to the export of education).

And the question is not only the reasonable prices, language and geographical proximity. The educational system of the Russian Federation at all levels, including the most highly profitable one – high, intends to increase its exports, as Russian researcher, A. Arefev, indicates, all the more, by the coming years, a lot of Russian universities will continue experiencing difficulties in admission of students due to depopulation of the Russian Federation and reduction of young people. The onset of the drop in the birth rate … raises on the front of the Russian higher education … the urgent question of finding university entrants outside the country, in order to avoid reduction of the teaching staff and the closure of the education institutions (Arefyev A.L. , 2010. p.195).

The prices for educational services will be also an important factor, rather comparable to Kazakhstan. In comparison with Belarus, the prices for education at leading universities of Kazakhstan are nearly twice as high, and at regional – in the order. For example, the prices of education in leading universities of the southern neighbor of Kazakhstan – Kyrgyzstan: particularly on demanded medical specialties, are twice lower than in the RK, which attracts a part of the Kazakhstan's entrants from Almaty, Zhambyl, South Kazakhstan regions. Prices for education in Kazakh universities are already comparable with the prices of Central and East European universities, in a number of universities – with West European, and the price for PhD training in Kazakhstan (about 10,000 U.S. $ per year) are almost equal to West European, which will be also one of the shocks for Kazakhstan's citizens to get higher and postgraduate education abroad – at similar and even lower prices students have the opportunity to see other countries, to obtain a high-quality Western education, to learn or improve their knowledge of foreign languages, to get a culture experience, etc.

Training programs of the Master's degree are also available on correspondence courses in the Russian Federation, and prices are lower in comparison with Kazakhstan, especially it concerns universities in Russian regions, and in frontier areas with Kazakhstan. If we consider, in addition to it, that in Kazakhstan Master's degree programs are not available by correspondence, but exclusively – in full time studies – according to the Bologna system, we can understand the growing tendency of the Kazakh Bachelor's degree holders from the frontier areas with the Russian Federation choosing the Russian Master's degree programs.

At the same time, employer – experts in Kazakhstan have lots of questions and critical remarks on the quality and content of correspondence Master's degree preparation in the Russian Federation, as Kazakh employers, particularly universities and research organizations, do not accept the educational trajectory of the Master's degree, prepared by correspondence training. Thus, the actual problem

will be harmonization of requirements, qualifications, educational legislation of the Member States of CES.

It is also necessary to consider that the Ministry of Education and Science of Kazakhstan has already refused the correspondence form of the Bachelor's degree for the category of applicants who receive a first higher education, according to the principle of " the first higher education – only full-time tuition " For example, Eurasian National University named after.L.N. Gumilyov does not provide higher education on correspondence courses. There are no such restrictions on correspondence courses in Russia, which reduces the value of Russian diplomas in the eyes of Kazakh employers.

The EU believes that the optimum period of studying abroad for foreign student is one or two years, thus it is desirable that first and second course students should be trained by their specialty in their native Alma-mater in homeland. For this reason, Kazakhstan refused the financing of the undergraduate education abroad by "Bolashak" program: the student must receive *his first education in homeland, or participating in programs of international, European academic mobility – the first two years (courses) in domestic university*, which solves lots of social and psychological aspects of students. It is also dictated by economic factors: the huge public funds spent on training, logistics, accommodation, social and medical insurance of Kazakh students abroad should be invested in their own, Kazakh universities at the modern stage of development. Preparation of Bolashakers[2] as a priority for

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[2] Bolashakers –the informal designation of scholars of the international grant of the President of Kazakhstan "Bolashak" (from the Kazakh language, "bolashak" – the future). The international grant "Bolashak" was founded by a Decree of the President of Kazakhstan N.A. Nazarbayev No. 1394 on November 5, 1993. For the first time in the history of the states of the former Soviet Union there was given an opportunity to talented youth, to get education completely at the expense of the state abroad by programs of bachelor – master-doctoral studies of PhD. 700 scholars got education in 13 countries of the world from 1994 to 2004 inclusive within the bounds of the Bolashak program. The international grant "Bolashak" became a peculiar guarantor of successful career growth and professional self-realization of its graduates in Kazakhstan. A confirmation of this is the fact that a lot of graduates of the program hold responsible posts in public service, in the ministries and departments of Kazakhstan.

According to provision on the "Bolashak" program, graduates of the program have guaranteed employment in public institutions. Since 2005, according to an order of the president of Kazakhstan, N. Nazarbayev, in the Message to the people of Kazakhstan declaring the necessity of annual granting of possibility of training in leading educational institutions of the world, three thousand young and talented Kazakhstan citizens have benefited from the international grant "Bolashak". The need for increasing the number of scholars was caused by the spirit of the time. In conditions of market economy that was already created, the state chose the way of development based on a model of competitive economy and steady growth of priority

Kazakhstan's economy programs of Master's degree, PhD studies in the leading foreign higher education institutions remained. In this regard, with creation and opening of a new type of international university – the University of Nazarbayev, a lot of hope is associated, as a model of university that provides the export services of higher education and as a new research university.

The "window of opportunities" is opening in front of Kazakhstan, which is necessary to be used as much as possible, concentrating all its strength. It is impossible to enter the top 50 most competitive countries in the world, without the internationalization of education and its major component – the export of educational services as non-primary sources of growth of economy. Either Kazakhstan uses the opening possibilities in interests of development of national system of the higher education and science, approving its own forces in a single scientific and educational market in the forming CES, and will go further feeling its confidence – actively engaging research and educational personnel in the Kazakhstan's market from foreign countries, or it will remain a donor country of "brains" and the country of departure of entrants for competing markets in the CES. And the most important effect on the export of education: the minds and talents – settlement of highly qualified experts from the number of foreign nationals that were studying in universities of Kazakhstan, which are more valuable than the proceeds from thought over and organized market of export educational services.

In these circumstances, until the non-return point is passed, Kazakhstan needs the weighed operational decisions on the specified problems and preserving and promoting our achievements in the academic field, which has been a result of reform of twenty years in this area. The Measures of voluntary nature led to extremely slow progress, so the government should initiate these processes now.

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branches for Kazakhstan with constantly growing demand for experts in the field of industrial and innovative development, science and education, management, marketing, logistics, new information technologies, reforming of housing and communal services and others.

The growth of the number of scholars is observed since 2005, by the 2009–2010 academic year the number of annually trained scholars of the Bolashak program had amounted to 3000 people. Granting the possibility of passing scientific training, and also quotas for rural youth, civil servants, scientific and pedagogical workers became reformed in 2008. Training and probation take place only in the best universities, taking leading positions in world ratings according to the Bolashak program.

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Serbia

Correlation of Leadership Characteristics with Personality Traits of Employees in Schools in Serbia

Abstract

The aim of this research was to connect leadership characteristics and skills of school employees in Serbia with their personality dimensions. Techniques of interviewing and scaling, instruments in the form of questionnaire and an attitude scale were applied in this study. Research population consisted of employees of elementary and secondary schools in Serbia (Vojvodina province), while the research sample comprised 252 respondents, including principals, deputy principals, teachers and professional associates (psychologists and pedagogues). Data obtained were processed in the statistical SPSS package (descriptive analysis, factor scores on extracted Promax dimensions, measures of linear and multiple correlations, discriminant analysis) and point to insufficiently expressed leadership features of employees in educational institutions in Serbia and a statistically significant relationship between leadership characteristics and the respondents' personality traits[1].

Key words: *education, leadership characteristics, employees in education, personality traits.*

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1. Introduction

Many authors (Fullan, 2001; Leithwood, 1992; Peters, 2005) state that management is the key of functioning of all, including educational institutions. Perception of school as an autonomous institution implies innovative meaning of leadership, which enables proactive development of human potentials and competences as a basic precondition for facing dynamic changes. Effective work of an educational institution implies that employees have certain characteristics and knowledge, particular *competences*. In addition to basic pedagogical and professional competences, leadership and organizational competences are increasingly necessary for employees in education. Why?

In today's knowledge economy, leader characteristics and entrepreneurship are not required only from managers, but from all employees, including those in education. Organizational knowledge becomes a part of general education that strengthens professional chances, social and personal progress. Furthermore, in order to retain their traditional position, educational institutions increasingly take the initiative and become the centre of social events, carriers of changes. Such educational institutions cannot be sustainable if their employees do not have basic leadership characteristics. Teaching staff, as a part of employees in education, need to have leadership skills as teaching requires it in the work with students, parents and the environment; and because of their influence on students (Bubulj et al., 2011). "By treating classroom management issues as an integral part of the educational process, teachers provide an essential 'education for life'" Rekab-darkolaei (2011: 336). Leadership skills can be acquired and learned; therefore as a responsible and enterprising society we need to learn leadership from early age, at school, as content, as well as ad hoc[2]. Precisely for all the above-mentioned reasons, leadership characteristics with personality traits will be investigated and linked in this paper.

This paper starts with contemporary determinants of leadership (Kouzes-Posner, 2003; Piters, 2005; Pierce-Newstrom, 2008) as an interactive, social process of common activities and personal development. Leadership is not reserved for certain individuals, it is a possibility for everyone; it primarily represents personal development and responsibility (Kouzes, Posner 2003; Haas, Tamarkin, 1992). In this research leadership is observed as a skill of unifying vision, purposeful deci-

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[2] In relation to this, Goleman (1995) was one of the first to point out the significance of the development of emotional intelligence (leadership skills depend on emotional intelligence) and capacity that its development has at school.

sion-making, successful communication and positive attitude towards common results, innovativeness, creativity, team spirit, entrepreneurship and responsibility. Contemporary and innovative school is the one that prefers such a concept of (self) development and (self)education and the one that gets new and more complex tasks. As pointed out by Arsenijević et al.: "The culture of an organization plays a crucial role in the transformation of an organization" (2009:521). The dominant function of leadership is reflected in humanistic (re)examination of all the subjects of educational practice: principal, teaching and professional staff (pedagogues and psychologists) and this research is focused on them. This is a special challenge for schools in Serbia as a transitional country, which is in the situation of educational reform, democratization and decentralization, facing its own requirements of contribution to the prosperity of education and culture, forming and defining its own identity.

This research has a goal to **bring leadership characteristics in relation to personality traits of employees in educational institutions in Serbia.** The research results should be "signposts" for improvement and mastering leadership skills, for the support to management in theory and practice, as well as for finding the way to prepare and "empower" the employees in education for growing interests, including the ones related to management and leadership.

Review of the literature

The National Association of Elementary School Principals (2001) identified six characteristics of instructional leadership; Méndez-Morse (1992) identified leadership characteristics that facilitate school change[3]. A big trace in this field has also been left by Fullan (2007, 2010), whose work includes deep insights into school reform, change management and leadership development in education.

With the growing concern of the effectiveness of education, the number of studies on leadership characteristics in education grows, but the majority are still oriented to the management of educational institutions. So far there have been a few papers regarding the leadership characteristics of all the employees in education or those of teaching staff. A study by Bartling and Bartlett (2005) assesses self-perceived leadership behaviours and related leadership styles in a sample of adult

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[3] The characteristics include: having vision, believing that schools are for student learning, valuing human resources, communicating and listening well, being proactive, and being a risk-taker.

educators. Up till now there have been only a few studies on the connectedness of leadership characteristics with other variables of employees in education, like Ngambi's study (2011) on the connectedness of leadership and morale in higher education.

Findings on the connection between leadership and other variables out of education still exist. Previous findings show that individual differences are important and that studying the relations between personality and key aspects of actions in an organization makes sense (Digman, 1990). Contemporary theories are more convincing in testifying on the impact of personality traits and (lack of) success in leadership, where the "Big Five" will be one of the primary ways to understand personality in the 21st century. This is supported by studies regarding the connection between leadership skills with emotional and spiritual intelligence (Goleman, 1995, 2001; Zohar, 2000).

Based on the literature overview, we can conclude that the subject of this research is relevant, justified, but also insufficiently studied so the results will open a new direction of this field.

2. The research

2.1. Methods and sample

The data obtained are processed by a statistical method and regulated by quantitative and qualitative analysis. The Principal Component Analysis was carried out on questionnaires in order to determine latent structures of measurement space. Mutual connection of the two variables was tested by Pearson's coefficient of linear correlation, and additionally by a series of multiple regression analyses, as it determines a higher level of connection that provides the possibility of prediction.

The research was realized in 2011 in elementary and secondary schools in Serbia on the sample of 252 respondents comprising principals, deputy principals, teachers, and professional staff (pedagogues and psychologists). 61.2% of the sample was teaching staff, 17% was administrative staff; 55% employed in elementary schools; 76.6% were female. The sample of the research was appropriate and intentional.

2.2. Research instruments

The following instruments were used:

Questionnaire for (self)assessment of Leadership characteristics (36 items) ranked by a Likert scale. The validity of the measuring instrument was verified by the Principal Component Analysis, which showed that the measurement

object was covered by 4 factors, while the reliability of the questionnaire was verified by Crombach's Alpha coefficient α=0.821, which proved that it was satisfactory.

Questionnaire for personality assessment "Big Five" (44 items) contains 5 basic factors that are called the "big five": *neuroticism, extraversion, openness, agreeableness and conscientiousness*. As this model had been operationalized many times (Cattel, 1995, Digman, 1990, Guilford, 1968), showing a high degree of conformity, in this case it was examined according to the "Big Five" of Costa&McCrae (1992), who operationalized Digman's concept of "Big Five" (Digman, 1990). It is conceptually and empirically the most elaborated one and it is assessed as a good inventory of personality traits, appropriate for all the studies that pledge a serious, reliable, detailed and comprehensive assessment of personality structure and thus it has become one of the most frequently used tests for understanding and interpreting personality.

3. Results

3.1. Factor Analysis of the Leadership Scale

The items of the scale were subjected to the Principal Component Analysis, with the intention to reduce the initial set of variables and discover the latent structure of the scale. Four factors by Promax rotation were extracted, which jointly explained 36.8% of the total variance (Table 1). Such a solution was chosen because it is the most interpretable.

Table 1: In the following tables only the items which have a very high correlation to the Promax factors are presented

Table 1: Characteristic roots and percentage of the variance explained

PRIOR TO ROTATION			AFTER ROTATION
Characteristic root	Percentage of variance	Cumulative percentage	Characteristic root
6.098	16.938	16.938	5.167
3.341	9.281	26.219	3.939
2.144	5.954	32.173	3.771
1.656	4.601	36.775	3.197

Table 2: The first Promax factor gathers the items related to low expressed leadership characteristics, and is called: *Low expressed leadership characteristics*

Table 2: Excerpt from matrix of structure of the first Promax factor

Question	1
Q17	.687
Q22	.604
Q33	.599
Q13	.598
Q10	.585
Q32	−.602

Table 3: The second Promax factor gathers the items related to expressed leadership characteristics and tendency to dominate. This factor is called: *Expressed leadership characteristics with a dominant*

Table 3: Excerpt from matrix of structure of the second Promax factor

Question	2
Q9	.732
Q4	.722
Q7	.657
Q18	.581
Q23	.566
Q27	−.465

Table 4: The third Promax factor gathers the items related to respondents' tendency to be led. The factor was called: *Tendency of respondents to be led by someone else*

Table 4: Excerpt from matrix of structure of the third Promax factor

Question	3
Q25	.608
Q8	.554

Table 4 (cont.)

Question	3
Q20	.464
Q1	−.469
Q14	−.481
Q35	−.506

Table 5: The fourth Promax factor gathers the items regarding the self-assessment of highly developed leadership abilities and the factor is called: *Self-assessment of oneself as a leader*

Table 5: Excerpt from matrix of structure
of the fourth Promax factor

Question	4
Q23	.571
Q1	.552
Q2	.503
Q36	.490
Q20	.458
Q10	−.406

Legend:
Q1: *I take responsibility.* **Q2**: *I try to make the group members happy.* **Q4**: *I love to dominate over the others.* **Q7**: *I have a strong need for power.* **Q8**: *I am easily discouraged.* **Q9**: *I am trying to lead the others.* **Q10**: *I do not speak much.* **Q13**: *I find it difficult to include the others in joint work.* **Q14**: *I take the initiative.* **Q17**: *I wasn't good at taking the responsibility over the group.* **Q18**: *I find it easy to impose myself on the others.* **Q20**: *I believe that a leader should allow anyone to say what the group should do* **Q22**: *I find it difficult to approach the others.* **Q23**: *I see myself as a good leader.* **Q25:** *I wait for others to lead.* **Q27**: *I do not like to dominate over the others.* **Q32**: *I easily introduce myself.* **Q33**: *I am afraid to draw attention.* **Q35**: *I want to bear responsibility.* **Q36:** *I want to be sure that everyone is included in the group.*

3.2. Correlation of Leadership Characteristics and Personality Traits

Pearson's coefficient of linear correlation

The correlation of leadership self-assessment and BFI personality dimensions was verified by Pearson's coefficient of linear correlation.

Dimension *Openness* statistically correlates with the first factor - this correlation is of low intensity and a negative sign (r=0.292; p=0). The second factor has

a very low correlation with *Neuroticism* (r=0.19; p=0.006) and *Openness* (r=0.22; p=0.002). The third factor is in a negative correlation with *Openness* (r=0.287; p=0). The forth factor statistically correlates with *Openness* (r=0.36; p=0), as well as *Agreeableness* (r=0.171; p=0.014) and *Neuroticism* (0.19; p=0.004), but these correlations are extremely low.

Multiple Regression Analysis

In addition to the mutual connection of the three variables by Pearson's coefficient of linear correlation, the connection was also tested by a series of multiple regression analyses where criteria variables were the factors of leadership, while the set of predictors consisted of personality dimensions. The analysis determined by multiple regression analysis determines a higher level of connection that provides the possibility of prediction.

1) Multiple regression analysis where the criteria variable is the first leadership factor – *Low expressed leadership characteristics*

The regression model is statistically significant at the level p=0.001. The coefficient of multiple correlation is R=0.326, and a set of predictors is explained with about 10% of variability of the variable system (R²=0.106; F=4.410).

Based on the obtained results, it is obvious that statistically significant beta coefficients have the predictors of personality dimension *Openness* (beta=-0.325; p=0). Both coefficients are of negative sign and low intensity. Other predictors do not have statistically significant contribution to the criteria prediction.

2) Multiple regression analysis in which the criteria variable is the second leadership factor – *Expressed leadership characteristics with a dominant desire for power.*

The regression model is statistically significant at the level p=0.003. The coefficient of multiple correlation is R=0.301, and the set of predictors explains about 9% of the variability of the variable system (R²=0.090; F=3.677).

Statistically significant beta coefficients with a criterion have *Neuroticism* (beta=0.169; p=0.028) and *Openness* (beta=0.159; p=0.034). These coefficients are of very low intensity, but since statistically significant connection is also obtained by Pearson's coefficient of linear correlation, it can be taken into account.

3) Multiple regression analysis in which the criteria variable is the third leadership factor - *Tendency of respondents to be led by someone else.*

The regression model is statistically significant at the level p=0.001. The coefficient of multiple correlation is R=0.334, and a set of predictors explains 11% of the variability of the variable system (R²=0.112; F=4.643).

Statistically significant partial contribution to prediction of the criteria has the dimension *Openness* (beta=−0.319; p=0).

4) Multiple regression analysis in which the criteria variable is the fourth leadership factor – *Self-assessment of oneself as a leader.*

The regression model is statistically significant at the level p=0.00. The coefficient of multiple correlation is R=0.430, and a set of predictors explains about 19% of the variability of the variable system (R^2=0.185; F=8.377).

Statistically significant beta coefficient with the criterion shows the dimensions *Extraversion* (beta=−0.162; p=0.021)*, Agreeableness* (beta=0.176; p=0.016) and *Openness* (beta=0.313; p=0). Coefficients are of very low intensity, but the same connection is obtained by Pearson's coefficient of linear correlation, so it is relevant.

4. Discussion

4.1. Analysis of Leadership Factors

Four leadership factors can be classified into two categories: one that characterizes and others that do not characterize the leadership characteristics of the respondents. The factors that characterize the features of leadership (the second and fourth) include both *Self-assessment of oneself as a leader* and *Expressed leadership characteristics with a dominant desire for power*. Therefore, both factors are illustrated by initiative, charisma and self-confidence, but the forth also with the need for domination. The second group of factors (the first and third) is characterized by a lack of leadership characteristics: *Low expressed leadership characteristics* and *Tendency of respondents to be led by* a lack of self-confidence, organizational skills or desire for success and responsibility; and less by items that explicitly illustrate the human need to be led. In the case of the third factor, the explicit desire to be led is combined by a lack of initiative and fear of responsibility.

4.2. Correlation of the Leadership factors and Personality dimensions

The results show that there is a correlation (of negative sign) between factor *Low expressed leadership characteristics* and personality trait *Openness*, which was pointed out by negative Pearson's correlation coefficient and multiple regression analysis. Introvert persons, prone to more conservative attitudes and a preference for the familiar over the new, have low expressed leadership characteristics.

Factor *Expressed leadership characteristics with dominant will for power* has a significant correlation with *Neuroticism* and *Openness,* based on both analyses. Persons who have leadership characteristics with a dominant desire for power show more expressed neuroticism and are more open. It is interesting that among the respondents who show openness as a dominant personality trait there are

a number of those who have strong leadership characteristics with the dominant will for power.

The tendency of respondents to be led by someone else is negatively correlated with *Openness*, which shows that more open people are less inclined to being led. This correlation is proven by both analyses.

Both analyses point out that *Self-assessment of oneself as a leader* has a higher level of correlation with *Openness* and *Agreeableness*. A person who assesses themselves as a better leader has a higher propensity to cooperate and is more open.

The results obtained using multiple regression analysis showed a **statistically significant relationship between leadership and personality characteristics of the respondents**. The results indicate that *Openness* proved to be the dominant personality dimension, which is statistically significantly associated with the estimated properties of the leader: open people are evaluated as leaders. Unlike neuroticism, which is specific to those who like to dominate the others, the *Agreeableness* feature is significantly associated with self-assessment of oneself as a leader. The results presented indicate that **the research scope is realized,** which precisely points to the contribution of this study to science.

5. Conclusions

The results showed a statistically significant relationship between leadership and personality characteristics of the respondents, suggesting that leaders are open persons, ready to cooperate, communicate and listen to the others and persons who clearly articulate their ideas. The results indicate that well-developed leadership characteristics of employees in educational institutions contribute to positive and constructive attitudes towards life, arranging working environment, better communication and teamwork abilities, improving both professionally and spiritually. Only these employees can be positive examples to students so that they could develop in the same direction and become ready to respond to the demands of modern life.

The correlation of leadership characteristics with personality traits of the respondents obtained in this research takes cue from the findings of Digman (1990), and indirectly from the findings of Goleman (1995) and Zohar (2000).

The results show that employees in educational institutions in Serbia with developed leadership characteristics have some inborn and natural predispositions (personality traits). This, however, does not mean that all those who have

leadership characteristics will become leaders, nor that personality traits represent the only necessary condition for becoming leaders. According to the well-known leadership theory (Haas, Tomarkin, 1992), which claims that everyone has the ability to become a leader, in order for all employees to develop their potential and abilities it is necessary to provide a general education for developing leadership potentials and putting them to practice to improve the educational process and the state itself.

Furthermore, school is Serbia is a traditional, centralized institution. A tendency to educational decentralization is recognized in Serbia, encouraged by the intention to contribute to schools' autonomy, to accelerate schools' internal development and responsibility of schools' environment for education. Although these are positive trends that will contribute to improvement in leadership characteristics of employees in education, primarily through creating conditions for their spontaneous development, it is necessary to systematically develop these competencies through specific measures, such as seminars for employees and students.

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Determination of Indicators of School Culture in Primary Schools

Abstract

School culture is one of the indicators of school quality. Effective school leaders are continually working on changing the school, analyzing and examining why their school needs to become a better place for all students and employees. To change school culture it is very important to determine at what level it is, what elements representing it are satisfactory, and which elements are essential to be changed with the goal of improving them. The aim of this study was to determine indicators of school culture in primary schools and on this basis to determine its level. Indicators of school culture were viewed from the point of view of 562 teachers, assistants and other staff in primary schools. Through factor analysis seven indicators of school culture were distinguished in primary schools: encouraging joint work, evaluating employee achievement, teacher collegiality, principal-teacher feedback, learning partnership, colleagues' compliments and personal involvement of teachers.

Key words: *school culture, school management, primary school, research.*

Introduction

In accordance with changes in other areas of labour, education in the last ten years has faced a series of attempts to increase the effectiveness of schools. The aim of modern school is to become more efficient, effective and flexible. A prerequisite for achieving a successful school is the quality, creativity, innovation, speed of change and adaptation. This fact indicates that school management should be

focused on changing the school system. Effective school leaders are continually working on changing the school, analyzing and examining why their school needs to become a better place for all students and employees. I accordance with that the most important task of school leaders is: building vision, understanding and development of people (students and employees), redesigning the organization, management of the teaching and learning processes in school.

School culture can have a positive impact on the learning process, just as it can seriously jeopardize the achievement of the academic mission. Modern trends in education are advocating students' independent work and this is only possible if the school developed a culture that encourages students to critically overlook problems, first try to understand them, understand the importance of school attendance and develop an atmosphere in which the effective realization of a given activity is possible. The culture of a school can be described as a way of living and working in it, the impact of history and tradition of the school and its success on the behavior of teachers, staff and all school employees. Culture gives meaning to teachers on how to behave in the entire educational process and to students on how to develop a positive climate in the classroom so they can fully use the potential that helps them to quickly and efficiently learn lessons and gain the necessary competences.

In order to change school culture it is very important to determine at what level it is in a school, and which elements are essential to be changed with the goal of improving them. Peterson and Deal (Staničić, 2006, 320) describe a good school as a place where teachers are aware of the common goal, which is dominated by the norms of behavior such as collegiality, professional development and hard work, a place where student success is celebrated, and where innovations are brought by teachers as well as parents, and where there is plenty of success, joy and humor. Lezote and Levine (1990) identified nine characteristics of effective schools and they say that it is common for effective schools to have a regulated environment and a productive climate and culture. According to these authors, the regulated environment in the school includes regulated interpersonal relationships, and among those the ones that stand out are cooperation, compromise, communication and collegiality.

Specific school culture represents an understanding of the school in a historical, institutional and normative sense. School culture has characteristics of organizational culture because the principal is responsible for creating and sustaining culture in school and basic communication values (Staničić, 2006, 332). Characteristics of school culture can be seen by analyzing the social environment that should promote interaction among employees, active communication among teachers, teacher collegiality and partnership of parents and students. This is an environ-

ment in which there are diverse groups of students, teachers are open to students' suggestions, students have opportunities to participate in decision-making, while teachers and students are trained to prevent and resolve conflicts.

Methodological framework of the research

The research topic is school culture. School culture is examined in this paper based on the opinion of employees in elementary schools. **The aim of the survey** was to identify the structure of school culture and determining factors of school culture in primary schools, and then, based on them, to evaluate the existing level of culture in schools. **The sample of the study** consisted of 22 primary schools (11 urban and 11 rural). A total of 572 respondents of which 484 (84.6%) were female and 88 (15.4%) were male. According to work experience, more than a half of the respondents, 295, had worked in the school for over 11 years, indicating the validity of the results. The age group that comprised the majority of the respondents was from 31-40 years (33.2%) and the age group of 41-50 32.5% of the respondents. The smallest number of the respondents was in the age group of over 60 years (1.7%) and in the group that comprised the respondents of 21-30 years of age (13.6%).

The instrument used in this research and which was used to extract indicators of school culture was developed by Gruenert (1998), called The School Culture Survey (SCS). SCS contains 35 questions with 6 Likert-type response alternatives: strongly disagree, disagree, partially disagree, agree, partly agree and strongly agree. In order to check the reliability of the measuring scale Cronbach's Alpha was used. Ratios over 0.7 were considered acceptable, and coefficients greater than 0.8 were considered good. In this study for 35 variables that related to the various elements of school culture, Cronbach's Alpha was 0.932, and it was concluded that the measurement scales used were reliable.

Results of the research and discussion

In the data analysis, factor analysis was used with factor extraction using the method of principal components analysis. Before conducting this analysis, we assessed the suitability of data for factor analysis. The value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy, KMO, was 0.943, which exceeded the recommended value of 0.6 (Kaiser, 1970), and thus it was concluded that the obtained data was suitable for the implementation of factor analysis. Barlett's Test of Sphericity (Bartlett, 1954) reached statistical significance (i.e. the value Sig. should be 0.05 or less, in this case, p=0.000), so the factor analysis was justified. Analysis of the

main components revealed the presence of seven components with eigen values over 1 (11. 753, 1.916, 1.809, 1.395, 1.347, 1.148, 1.010). The seven components explained the total of 58.2% of the variance. With the inspection of communality (h2) as a measure by which every variable participates in the entire system it could be established that almost all the variables occupied a significant share in defining the system. "Mission reflects the values of the community," "Teaching performance reflects the mission of the school," and "Involvement in school policy" had somewhat lower communality. In order to obtain simpler solutions, extensive rotation was performed by the principal components method, the results obtained were assembly and structure of the school culture variables (Table1).

The first factor includes nine variables related to the joint work of teachers and encouraging the exchange of ideas and expressions of dissent. It showed how well-informed the teachers were concerning the issues in schools, encouraging teachers to interact, exchange ideas and encouraging innovation, encouraging teachers to work together on developing and evaluating projects, as well as on how well the school mission was in line with the learning effect. The value of Cronbach's Alpha coefficient for this factor was 0.870, indicating that the scales used for measuring were reliable. On the basis of the variables that included the first factor it can be called *Encouraging Joint Work.* **The second factor** included four variables to measure the degree of monitoring the achievement and progress of teachers by the principal or some outside institution. It also included variables related to rewards given to the teachers by the principal. The value of Cronbach's Alpha coefficient for this factor was 0.766, which exceeded the recommended value of this coefficient. Based on the variables included, this factor can be called *Evaluation of Employees' Achievement.* **The third factor** measured the degree to which teachers supported each other, how much they trusted each other and the they were willing to help each other when there was a problem. It also indicated the amount of time teachers spent planning together. This factor contained four variables and the value of Cronbach's Alpha coefficient of 0.759. Considering that the included variables were related to cooperation among teachers this factor can be called *Teachers Collegiality.* **The fourth factor** included only two variables, but the correlation of the coefficients between the variables was strong. This factor measured the degree to which the principals praised the teachers for a job well done. Based on the variables included in the fourth factor it can be called *Compliments of the Colleagues.* **The fifth factor** included nine variables related to the interaction between principals and teachers. It showed how much the leader (principal) believed the professional opinion of teachers and adequately evaluated teachers' ideas. Also, this factor indicated what opportunity teachers had to dialogue and how great was their involvement in

decision-making process. It measured the understanding of school mission by teachers. The value of Cronbach's Alpha coefficient for this factor was 0.870. Based on the variables included in the fifth factor it is called *Principal – Teacher Feedback.* **The sixth factor** included four variables that related to the degree to which teachers, parents and students worked together for the common good of students, and also at what level parents and teachers shared common expectations about student achievement and trust. The value of Cronbach Alpha's coefficient for this factor was 0.756. Given that the overall factor coincided with the factor obtained in previous studies (Gruenert, 1998; Mees, 2008) the sixth factor may also be called *Learning Partnership.* **The seventh factor** included variables related to the willingness of teachers to be actively involved in school policy, their motivation to engage in tutoring other colleagues, and information about how other teachers worked with students. Given the variables included, this factor can be called *Personal Involvement of Teachers.*

In a survey conducted by Gruenert (1998) variables were grouped under the seven factors, by which the quality of school culture was measured. The following factors were obtained: collaborative leadership, teacher collaboration, professional development, collegial support, unity of purpose and learning partnership. Comparing the obtained factors with previous research (Gruenert, 1998; Mees, 2008), only one factor fully matched and that was the sixth factor, namely "Learning partnership". This result can be attributed to differences in the countries where research was conducted, also to the education systems that are established in them, and leadership styles that are used in these schools. Given that in our country principals lack professional training in the field of educational management, they do not apply some of the basic principles of effective leadership. In addition to that, in most schools there is no transparent published school mission and the teachers have different reasoning on issues related to the understanding and supporting of the mission of the school. Finally, problems arose also with issues related to professional evaluation by the faculties and also with the issue of connecting the faculties with schools, given that in our country such relationships are almost non-existent. Nevertheless, the identified factors clearly point to the common meaning of the variables that are included in them, leading to valid results and conclusions.

The obtained structure of the indicators of school culture was subjected to analysis of the representation of each indicator in schools where the research was conducted. By calculating the mean and standard deviation obtained for each factor, the degree of representation of indicators of school culture was determined (Figure 1). According to the calculated values, the most common indicator was the "Personal Involvement of Teachers" ($\mu=3.771$, $\sigma=0.904$) and the least represented

Figure 1. Mean values of the representation of certain factors of school culture
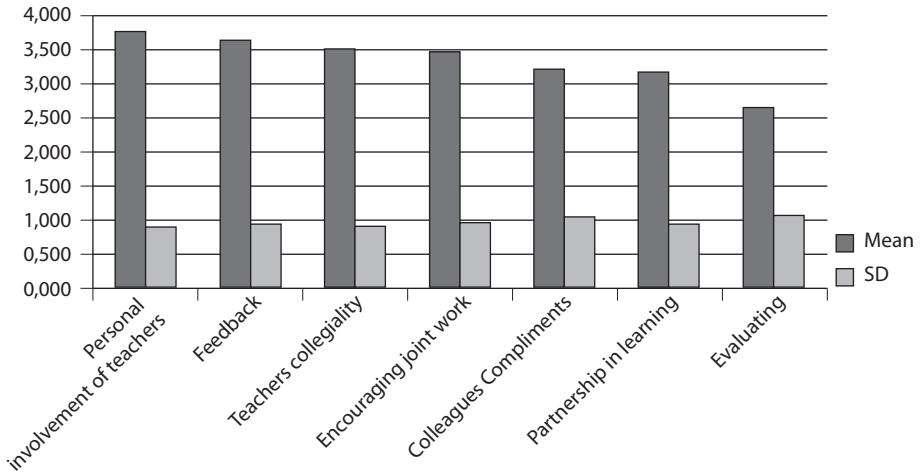
was the indicator of "Evaluation" (μ=2.651, σ=1.086). After the most represented indicator, three indicators appeared with similar values, in the order by size, "Feedback" (μ=3.656, σ=0.933), " Teachers Collegiality " (μ=3.515, σ=0.905) and "Encouraging Joint Work" (μ=3.46, σ=0.979). With slightly lower values there were indicators "Colleagues' Compliments" (μ=3.214, σ=1.049) and "Partnership in Learning "(μ=3.179, σ=0.937). The results of the research by which the most common indicator of school culture was *"Personal Involvement of Teachers"*, while the least represented indicator appeared to be *"Evaluation"*, reflected a realistic situation in schools in Serbia, confirmed by additional comments of the respondents collected during the survey. On the one hand, this result indicated the teachers' willingness to actively participate in school policy and awareness of personal contributions to school culture by maintaining the current base of knowledge through continuous professional development. On the other hand, the results indicated a lack of evaluation from the principal and other colleagues as well as rare rewards for hard working teachers. These results indicated that teachers who aspired to professional development did it because it was their personal choice and not because they were motivated by the behavior of the principal. Because those ambitions are often disadvantaged when compared to colleagues who have no such affinity. Just from these two factors some initial conclusions about the condition of the school culture in the schools in our country can be drawn. Teachers feel the

need to contribute to improving the state of their school culture through their own efforts, but on the other hand, they are not sufficiently rewarded or valued by the principals and colleagues. The indicator of *"Principal – Teacher Feedback "* is the second most represented in our schools. This indicator refers to the relationship between principals and teachers regarding the performance of teachers at school, which demarcates their possible ambitions for improvement. The variables included are related to the fact that the principal trusts and values his teachers and, on the other hand, teachers express their understanding and support for the mission of the school. The problem that arises in this indicator is that in our schools there are no clearly expressed missions, and teachers are not sure what is the subject of their support. The answers that they gave can be attributed to the fact that they believe that by the mission they comprehend some unwritten guiding star to which all employees in school aspire, and by these responses they are expressing their identification with the positions of their principals. Such a highly rated indicator implies good feedback between the principal and teachers, at least when it comes to issues related to teaching, where the principal makes the work of teachers easier and trusts in their decisions, and in return teachers show the principal a high level of support in achieving the mission of the school. The indicators of *"Teachers Collegiality"* and *"Encouraging Joint Work"* were also given a lot of high marks. This is a result of the good relations between colleagues regarding the syllabus, where they express a high level of willingness to help and trust each other. On the other hand, the results indicate encouragement of joint work by the principal, which together with collegiality of the teachers points to well-established relationships between colleagues concerning cooperation and mutual exchange of ideas. These two factors indicate well-established school culture when it comes to the indicators related to teaching. The indicators that received worse marks are *"Colleagues' Compliments"* and *"Learning Partnership".* This result confirms the previously obtained poor results related to the poor evaluation of the work and not enough rewarding of the colleagues and by using the indicator of "Colleagues' Compliments" it may be concluded that praise by colleagues and by the principal are of rare occurrence. Next to last by its presence is the indicator "Learning Partnership", implying very poor communication between parents and teachers. According to this indicator, it can be concluded that parents' and teachers' expectations of student achievement differ as does parents' confidence in teachers, which is very low.

Such a bad result of this indicator shows that the condition of school culture in our schools is not at a high level when it comes to relations with outside factors, who have a direct interest in school work.

Conclusion

The study of school culture provides information on common values, beliefs, behavior patterns and relationships in school. Each factor measures a unique aspect of common culture. Based on the research presented in this paper we can discuss the following dimensions of school culture present in primary schools: encouraging joint work, evaluating employee achievement, teacher collegiality, principal-teacher feedback, learning partnership, colleagues' compliments and personal involvement of teachers. Based on these indicators it is possible to gain insight into the quality of school culture in primary schools in our country. The dimensions of school culture are directly dependent on the style of school management, as well as on the specific conditions in which the school operates. Summarizing the results we can draw a general conclusion that the condition of school culture is at a satisfactory level, but only when talking about relationships related to teaching, the relationship between colleagues as well as principals and teachers. When it comes to evaluating the professional development of teachers, colleagues' compliments and rewards from principals it may be concluded that these are the indicators on which schools have to work more. If there are no praises and rewards, this reduces teachers' motivation for professional development, which is a key indicator of improving the overall school culture. Relationships with parents are also at a low level and concerning expectations regarding student achievement it is possible to arrange more frequent meetings of teachers and parents and with better informing of parents about their children's accomplishments. Whether and to what extent this subject will attract special attention depends on school principals, who are the direct creators of school culture. Raising principals' awareness of the need for better motivation and rewarding of teachers and development of better relationships between parents and teachers are criteria of developing better school culture that will in future be in accordance with the needs of all stakeholders involved in primary education.

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Table 1. Pattern(A) and of structure(F) matrix of school cultur variables (PatternMatrix)

Variables	A1	A2	A3	A4	A5	A6	A7	F1	F2	F3	F4	F5	F6	F7
Joint work on evaluat.	.679	-.024	.239	.013	.042	-.060	.001	.765	.299	.420	-.021	.382	-.387	.269
Support exchange ideas	.632	.005	.145	-.153	.119	-.054	.015	.748	.321	.333	-.192	.439	-.373	.281
Admin. protect instruct.	.573	.184	-.089	.050	.191	.001	.000	.697	.436	.110	-.002	.441	-.317	.241
Mission of teaching	.545	.084	-.027	.140	.008	-.067	.177	.656	.328	.168	-.088	.350	-.428	.319
Expression of dissent	.527	.038	-.036	-.057	.038	-.193	.102	.647	.338	.161	.103	.301	-.334	.368
Joint work of teachers	.505	.067	.417	-.028	-.219	.026	.192	.636	.382	.013	-.186	.610	-.293	.404
Supporting innovation	.416	.130	-.209	-.121	.410	.027	.181	.591	.291	.520	-.042	.133	-.262	.363
Mission reflects values	.373	.319	-.028	-.057	.044	-.103	.098	.581	.522	.154	-.093	.327	-.375	.296
Teachers are informed	.355	-.069	-.051	-.199	.352	-.178	.119	.367	.832	.139	.024	.237	-.368	.133
Evaluat. Prof. develop.	-.106	.843	-.042	.152	.007	-.092	-.028	.232	.817	.067	.127	.159	-.313	.083
Evaluat. From faculties	.023	.792	.003	.054	.025	-.097	-.026	.594	.673	.153	-.203	.272	-.324	.149
Mutual evaluat of ideas	-.030	.578	.268	-.125	.063	.043	.186	.331	.635	.366	-.151	.282	-.264	.322
Rewarding teachers	.399	.516	.000	-.166	-.011	-.026	-.064	.455	.354	.716	-.004	.299	-.428	.057
Joint planning	.236	.155	.622	.000	.032	-.148	-.179	.210	.136	.679	-.051	.360	-.426	.205
Mutual trust	-.098	-.032	.596	-.056	.180	-.241	.047	.320	.261	.642	-.055	.397	-.272	.456
Willingness to help	-.014	.112	.552	-.036	.187	.037	.313	.456	.339	.590	.011	.348	-.435	.256
Search for new ideas	.194	.128	.461	.024	.076	-.159	.051	.068	.128	-.146	.782	.039	-.070	.010
Colleagues' respect	.070	.136	-.213	.799	.077	-.017	.000	-.148	-.116	.163	.715	-.210	.042	.027
Complim. Of principal	-.094	-.051	.208	.696	-.176	.018	.102	.352	.251	.317	-.209	.769	-.317	.341
Principal evaluates ideas	-.012	.169	.019	-.117	.725	.024	-.034	.338	.322	.180	-.173	.754	-.273	.181
Principal trusts teachers	-.038	.059	.150	-.158	.690	-.009	.133	.534	.444	.106	-.178	.673	-.305	.444
Possibilities of dialogue	-.026	-.054	.263	.124	.629	-.003	.067	.284	.120	.398	.084	.672	-.280	.254
Principal makes easier	.199	.237	-.104	-.114	.506	.041	.233	.477	.326	.199	.004	.629	-.543	.277

Table 1. (cont.)

Variables	A1	A2	A3	A4	A5	A6	A7	F1	F2	F3	F4	F5	F6	F7
Teachers' decisions	.291	-.055	-.025	.051	.447	-.251	-.013	.533	.234	.198	.010	.627	-.489	.233
Mission provide direct.	.151	.064	-.031	.042	.445	-.310	.044	.428	.257	.508	-.024	.598	-.516	.214
Supporting the mission	.096	.006	.334	.001	.406	-.254	-.029	.573	.226	.162	-.241	.575	-.418	.345
Professional circles	.294	-.051	.308	.196	.334	-.058	-.184	.533	.333	.168	-.013	.547	-.496	.416
Understanding mission	.241	.064	-.063	.027	.309	-.251	.208	.435	.161	.431	.169	.465	-.315	.042
Parents trust	-.135	.072	.037	.023	.029	-.811	.066	.238	.304	.251	.038	.295	-.818	.219
Parents–teachers expect	-.009	.047	.105	-.008	-.028	-.737	-.080	.275	.278	.289	.010	.236	-.751	.089
Comm. parent–teacher	.071	-.103	-.011	-.093	-.066	-.658	.318	.380	.440	.178	.085	.237	-.692	.044
Pupils' responsibility	.126	.227	-.019	.083	-.029	-.616	-.147	.353	.176	.204	-.086	.254	-.691	.445
Aware of colleg. work	-.015	.081	.004	-.057	.015	-.165	.711	.309	.248	.169	-.078	.276	-.340	.760
Current knowledg. Base	.319	.111	.141	.099	-.092	.039	.557	.511	.305	.289	.070	.218	-.242	.661
Involvement in school	.042	-.097	-.035	.181	.304	-.021	.502	.273	.064	.114	.146	.417	-.209	.573

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
a. Rotation converged in 25 iterations.

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The Violent Behaviors among the Students in Rural and Urban Areas of Turkey

Abstract

Violent behaviors among students are becoming an important matter for studies in educational research. Especially, this kind of behaviors has been observed in elementary schools. In this study we investigated violent behaviors among the elementary school students in rural and urban areas. The purpose of this study was to investigate the violent behaviors regarding some variables such as gender, classroom and location of the school. We focused on five dimensions of violence (physical, verbal, sexual, emotional and institutional). Survey method was used in the study. 2811 students, being educated in 7 rural and 7 urban areas, participated in this research in Turkey. As a result of this study, we found that there was a significant difference between the students educated in rural and urban areas in terms of the institutional violence dimension.

Keywords: *student, violence, primary schools.*

Introduction

Violence in every part of society continues to be a global epidemic that kills and tortures physically, psychologically, sexually and economically. Violence in society is a significant public concern, particularly after the spate of tragic shootings in recent years (Small and Tetrick, 2001). Perhaps, violence can be thought of as a natural human reaction to avoid unpleasant and painful experiences, but it is spreading and it is a prevalent problem.

Scientific studies on violence date back to the 1970s. However, we could see violent actions long before. The first scientific studies on violence started at the end of the 1970s in Norway, Sweden and Finland (Kartal and Bilgin, 2007). School-based dating violence programs began to appear in Canada and the United States in the mid-1980s. Especially, Norwegian researcher Don Olweus's book "Violence at Schools" is admitted a turning point in these studies. Recently, these studies have been mostly going on in England and the USA. People define violence in different ways although they point at the same concepts in people's mind. Violence can be defined as aggressive behavior towards human beings and property (Osler and Starkey, 2005). Violence, which is a sensitive issue, provokes anxiety (Ohsako, 1997). Erich Fromm thinks that violence is completely in the mind and heart of people but it does not come from heritage (Taktak, 2007). Olweus (1999) said that violence is an aggressive behavior where the actor or perpetrator uses his/her own body or an object (including a weapon) to inflict (relatively serious) injury or discomfort.

School violence includes a range of experiences: teasing, taunting, harassment, physical intimidation, and assaults (Furong, Pavelsk, Saxton, 2000). So far, there has been no international standard classification of violent behaviors because the types of violence at schools differ across countries and continents (Fuchs, 2008). However, The *World Report on Violence against Children* identifies the main forms of violence as follows: physical and psychological punishment; bullying; sexual and gender-based violence; external violence: effects of gangs, conflict situations, weapons; and fighting.

Physical violence can be defined as hitting, smacking, slapping or spanking someone with the hand or an implement. It can also involve kicking, shaking or throwing students, scratching, pinching, biting, pulling hair, boxing ears, forcing students to stay in uncomfortable positions, burning, scalding or forced ingestion as in washing students' mouths out with soap (King, 2009). Whereas psychological punishment is belittling, humiliating, threatening or ridiculing someone. Bullying means exposing repeatedly aggressive behaviors that deliberately cause injury or discomfort through physical or verbal attacks, fighting or psychological manipulation. Bullying is a covert activity, especially as practiced by students who are skilled at bullying behaviors (Frey, 2005). Sexual harassment is defined as "unwanted and unwelcome sexual behaviors that interfere with your life" (Weist, Bryan, Dantzler, Martin, D'Amico, Griffith, Gallun, 2009).

Violence at school is an inherent situation today. All students need a safe and peaceful school environment to feel comfortable and be successful. Moreover, to represent the brightest hopes of our society for future, schools free from external

distractions and danger are thought to be safe havens of learning (Eng, 2001). Schools should organize regulations that directly target *zero-tolerance policies* (Juvonen, 2002).

We know that the classroom is a dynamic place where students develop in different ways. When students interact with each other, some of these differences might cause conflicts. Exposure to this student-student violence may increase the probability of violent behavior through the demonstration and reinforcement of violent attitudes (Funk, Baldacci, Pasold, Baumgardner, 2004). Pupil to pupil violence is the main subject of many statistics today (Gittins, 2006). School culture and especially school climate are believed to play a major role in this pupil to pupil violence (Steffgen, 2007). Violence can be increased among pupils through watching violence which is supported and influenced by out-of-school gangs, street drug dealers and drug addicts; parents' punitive and inconsistent discipline and child-rearing practices; poverty and sanitary conditions; crimes at the society level; and the fact that violence often takes place on the way to and from school (Ohsako, 1997).

Feeling unsafe alters the quality of life for children in schools besides influencing their academic performance (Twemlow, Fonagy and Saceo, 2001). To deal with violence in schools some more actions should be undertaken. Violence can induce some kinds of behavior on educational agents, which aim to improve the quality of education and increase school attendance (Severnini and Firpo, 2009). School should produce an environment where learners can feel free and find opportunities to learn. To improve the climate of schools and classes through staff and social education for pupils some programs should be designed (Gittins, 2006). To be effective for violence prevention, the programs should include students, families, teachers, administrators, staff, social and mental health professionals, school board members and parents (Kramen, Massey and Timm, 1999). Promoting respect and tolerance, managing anger, resolving conflicts, supporting safety and uniting in action will help to lessen violence (Finn, 2009). According to Radojkovic (2007) a program dealing with violence should have four goals: the first is to achieve an improved understanding of the bullying phenomenon, the second is to get teachers and parents actively involved in the project, the third is to develop clear rules prohibiting bullying and the fourth is to protect and support the victims.

In short, we should neither minimize nor exaggerate the problem of school violence (Volokh and Snell, 1998). We should learn how to handle it with less damage. We should be aware of the fact that in recent decades many children are routinely exposed to physical, sexual, psychological violence, including sexual exploitation in their homes and schools. Skiba et al. (2000) summarize the preven-

tion ways of violence at school: creating a safe and responsive school climate, early identification and intervention, and effective responses to disruption and crisis. The key to the prevention of violence lies in shaping children's beliefs, attitudes, and behaviors before violence becomes an automatic manifestation of their anger and a seemingly expedient and respectable way to resolve conflict or get what they want (Remboldt, 1998).

The Aim of Study

The purpose of this study is to investigate violent behaviors among primary school students, educated in rural and urban areas, in physical, verbal, sexual and emotional and institutional dimensions. In this context, answers to the following questions will be searched:

- Is there a difference between students' gender and their violent behaviors towards each other?
- Is there a difference between students' grade and their violent behaviors towards each other?
- Is there a difference between the students educated in rural or urban areas and their violent behaviors towards each other?

Methodology

The population of this study was Afyonkarahisar province and the sample was 7 primary schools in rural areas and 7 primary schools in urban areas. The research sampling was selected via the convenience sampling method (Fraenkel, Wallen, 2006:99) from non-random methods. There was a total of 2811 students from 14 primary schools involved in this study. 1443 (51.3%) of them were male, and 1368 (48.7%) of them were female. Besides, 528 (18.8%) of them were 4th graders, 517 (18.4%) of them were 5th graders, 563 (20%) of them were 6th graders, 615 (21.9%) of them were 7th graders and 588 (20.9%) of them were 8th graders. Furthermore, 1771 (63%) of the participants lived in urban areas and 1040 (37%) of the participants lived in rural areas.

Descriptive scanning method was used for the study. The reliability of the questionnaire administered to the students (in physical, verbal, emotional, sexual and institutional dimensions) is shown in Table 1. It is proposed that bullying experienced in schools can be examined in four different categories, like physical (pushing, kicking, etc.), verbal (name calling, teasing, etc.), emotional (excluding, damaging properties, etc.), sexual (harassment with hands, saying words with

sexual meaning, etc.) (Elliot, 1997). The survey "The types of behavior encountered among pupils in schools" used in this study was upgraded (Turan, Çubukçu & Girmen, 2010) in line with the classifications in the survey "Bullying and Violence", which was prepared by Çınkır and Karaman-Kepenekçi (2003). The survey was prepared as a data collection instrument for teachers.

Table 1: Reliabilities and the Five Subscales
(applied to pupils)

Type of behavior	Items	Reliability (alpha)
Physical	1,2,3,4,5,6	.66
Verbal	7,8,9,10,11,12,13,14	.78
Emotional	15,16,17,18	.72
Sexual	19,20,21	.71
Institutional	22,23,24	.73
Total	**24**	**.87**

The reliability of the scale is shown in Table 1 with all the sub-sections. There is personal information of the teachers who participated in the research in the first part of the scale. There are 24 questions for the students educated in rural and urban areas in the second part of the scale. The questions are in physical, verbal, emotional, sexual and institutional dimensions. The questionnaire is a Likert-type (Likert, 1932) questionnaire (totally disagree-1 point, disagree – 2 points, uncertain-3 points, agree-4 points, and totally agree – 5 points).

In the analysis of the quantitative data, the researchers used the descriptive statistics, the independent samples t-test and one way ANOVA with alpha level 0.05.

Results

1- Is there a difference between students' gender and their violent behaviors towards each other?

Table 2, the independent samples t-test results, points out that there is a statistically significant difference between the male and female students in the verbal, sexual, and institutional dimensions. However, there is no significant difference found between the male and female students in the physical and emotional dimensions. The male students thought that there is less verbal violence, while the female

students thought that there is more. In terms of sexual violence, both the male and female students said that there is no sexual violence. In terms of institutional violence, the male and female students sometimes write on their desks and on the walls of the school and restrooms. Both the male and female students stated that there are rare violent actions in school.

Table 2: Independent samples t-test results for the gender

	Gender	N	M	SD	SE	t	df	P
physical	Male	1443	1.69	.576	.015	−.434	2804.010	.664
	Female	1368	1.70	.523	.014			
verbal	Male	1443	1.81	.720	.019	6.309	2794.682	.000*
	Female	1368	1.65	.636	.017			
emotional	Male	1443	1.67	.800	.021	1.103	2809	.270
	Female	1368	1.64	.759	.021			
sexual	Male	1443	1.48	.612	.016	6.526	2780.098	.000*
	Female	1368	1.34	.524	.014			
institutional	Male	1443	2.98	1.152	.030	-3.706	2809	.000*
	Female	1368	3.13	1.114	.030			
general	Male	1443	1.86	.558	.015	2.738	2798.739	.006*
	Female	1368	1.81	.498	.013			

*$p < .05$

2- Is there a difference between students' grade and their violent behaviors towards each other?

Table 3, one way ANOVA, shows that there is a statistically significant difference between the students educated in 7 rural area schools and the students educated in 7 urban area schools in reference to the school type in the physical, verbal, emotional, institutional and general dimensions ($p<0.05$). Analysis of the means indicates that there is no violence in the physical, verbal, emotional, and institutional dimensions.

According to the Scheffe test, the 4th grade students are exposed to physical violence more than the 5th, 6th, 7th and 8th grade students. There is a difference found between the 7th grade and 4th and 5th grade students with regard to verbal violence according to the Scheffe analysis. There is a difference between the 4th and 5th grade students and 6th, 7th, and 8th grade students in terms of emotional violence. When

Table 3: The ANOVA Analysis of The Students Grade

		Sum of Squares	df	Mean Square	F	Sig.	AF
Physical	Between Groups	21.265	4	5.316	17.965	.000*	
	Within Groups	830.362	2806	.296			1–3,4,5 2–4,5 5–1,2,3
	Total	851.627	2810				
Verbal	Between Groups	5.885	4	1.471	3.144	.014*	
	Within Groups	1313.020	2806	.468			4–1,2
	Total	1318.904	2810				
emotional	Between Groups	40.164	4	10.041	16.882	.000*	
	Within Groups	1668.979	2806	.595			1,2–3,4,5
	Total	1709.143	2810				
Sexual	Between Groups	18.164	4	4.541	13.995	.000*	
	Within Groups	910.476	2806	.324			1–2,3,4,5 2–1,4
	Total	928.640	2810				
Institutional	Between Groups	11.026	4	2.756	2.138	.074	
	Within Groups	3616.980	2806	1.289			
	Total	3628.006	2810				
General	Between Groups	9.017	4	2.254	8.098	.000*	
	Within Groups	781.067	2806	.278			1–4,5 4–2
	Total	790.084	2810				

*p <.05

compared to the 4th and 5th grade students, the 6th, 7th, and 8th grade students think that there is less emotional violence. This result shows that the 6th-7th-8th grade students can control their emotions more easily than the 4th-5th grade students. In all the grades, none of the students thought that there is sexual violence. In all the grades, the students said that there is sometimes institutional violence. When the mean is examined, it can be seen that the higher the students' grades, the more violence happens in terms of institutional violence. This may be a result of the fact that their physical power is getting higher in addition to adolescence.

3- Is there a difference between the students educated in rural or urban areas and their violent behaviors towards each other?

Table 4 below shows that there is a significant difference between the students educated in 7 rural area schools and the students educated in 7 urban area schools in terms of the school type in the physical, verbal, emotional, institutional, and general dimensions (p<0.05). It has been understood that there is no violence in the physical, verbal, emotional, institutional dimensions when the mean is examined.

Table 4: t-test results for the location of the school

	Location of the school	N	M	SD	SE	t	df	P
physical		1771	1.67	.532	.013	−2.563	2030.057	.010*
	Urban	1040	1.73	.579	.018			
verbal	Rural	1771	1.70	.667	.016	−2.923	2061.345	.004*
		1040	1.78	.713	.022			
	Urban	1771	1.63	.771	.018	−2.233	2809	.026*
	Rural	1040	1.70	.793	.025			
emotional		1771	1.37	.538	.013	−4.322	1916.681	.000*
	Urban	1040	1.47	.628	.019			
sexual	Rural	1771	3.13	1.109	.026	4.323	2080.604	.000*
		1040	2.93	1.172	.036			
general	Urban	1771	1.82	.513	.012	−1.901	2032.276	.057
	Rural	1040	1.86	.558	.017			

*p <.05

It is seen that there is no violence in the physical, verbal, emotional, institutional dimensions. In other words, there is more violence among the students educated in rural areas in the physical, verbal, emotional, and sexual dimensions. However, there is a significant difference in the level of "sometimes" in the institutional dimension. In the institutional dimension, the students in urban areas vandalize school property more often. When examined generally, there is no significant difference in the schools in the rural and urban areas (p>0.05).

Conclusion, discussion and recommendations

The study which aimed to define the degree of 2811 students' violent behaviors towards each other in 14 primary schools located in rural and urban areas shows

that there is a statistically significant difference between the male and female students related to the gender variable in the verbal, sexual and institutional dimensions. It can be seen that both the male and female students demonstrate less verbal and sexual violence, however, in institutional violence, they sometimes write on their desks and on the walls of the school and restrooms.

It has been found that there is a significant difference between the students educated in 7 rural area schools and the students educated in 7 urban area schools in terms of the school type in the physical, verbal, emotional, institutional and general dimensions. There is not physical, verbal, emotional, or sexual violence among the students educated in rural areas. Physical, verbal, emotional and sexual violence is more common among the students in the rural areas when compared with the urban ones. In terms of institutional violence, the students in the rural areas cause more harm than the students in the urban areas.

Moreover, there is a statistically significant difference in the physical, verbal, emotional, sexual, and general dimensions based on the grade levels. It can be noticed that there is no physical, verbal, emotional or sexual violence; however, there is violence at the level of "sometimes" in institutional violence.

The study also showed that there is a significant difference in terms of all the variables in the physical, verbal, emotional, sexual, and institutional dimensions. However, physical, verbal, emotional and sexual violence can be rarely seen while institutional violence can be sometimes seen. Institutional violence is one of the prior violent behaviors in all the variables. There is more institutional violence among the 6th, 7th, and 8th grade students in the urban areas. Especially, the students write on the walls of the school and restrooms. The studies of Hantler (1994), Durmuş and Gürkan (2003) corroborate these results Then, how should we prevent institutional violence in schools? Why is institutional violence more spread among the 6th-7th-8th grade students? We can say that these problems result from the puberty of the students. During this period, the physical development of the students is so fast that they behave in a violent way. Institutional violence in urban areas can be caused by the limited area where people can relax and the apartment life. The students in rural areas can use their physical energy freely and in this way they can relax. Then, what should we do? Mark D. Weist, Yaphet U. Bryant, Joyce Dantzler, Saran Martin, Marie D'Amico, Brian Griffith, Betsy Gallun, (2009) said that some violence prevention programs can be used by the school management, parents, teachers and other school participants in order to decrease violence among the students and institutional violence. In this context, as Debarbieux (2003) suggested, some precautions can be taken in order to bring away social and economic inequality. In addition to these precautions,

both schools and local administrations should increase the number of places where the students can exercise and relax.

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Diagnosis of Aggressive Behaviours among Students as a Sign of Pathology in the Rural Environment with Recommendations for Preventive Measures

Abstract

This article comprises a presentation of diagnostic results of research conducted among students from rural schools. The problems mentioned in the study concern the occurrence of omnipresent physical and verbal aggression in youth. The study findings allowed for drawing conclusions for the purpose of pedagogical and preventive measures which may serve for developing an adequate, entirely tailor-made, preventive program, thus ensuring the highest level of effectiveness guarantee.

Key words: *physical aggression, verbal aggression, youth*

Introduction

On account of a visible increase in the occurrence of aggression in youth there is a huge need for extending pedagogical activity within counteracting already existing acts of aggression as well as prevention in this scope. Aggression is *a peculiar kind of behaviour which takes on the form of an initiated attack, causing specific material, physical or moral damage* (Moczydłowska, Pełszyńska, 2004, p. 34). An aggressive behaviour violates the physical and mental area of the other person without his or her consent, additionally causing damage. Based on relevant literature there are the following types of aggression: physical, verbal and intermediate, which consists in inciting other people to act aggressively or refusing to perform some tasks (Robakiewicz, 2004).

Preventive measures are based on the belief that the elementary human right is the right to live in safety, without being humiliated or repressed by the environment (Wojciechowski, 2002). The occurrence of violence is dramatically flooding Polish schools whereas teenagers, growing up in the atmosphere of aggression, as adults cope with problems in their lives in a similar way and in the same way perform their parental and social roles (Ostrowska, Tatarowicz, 1998). Apart from that, it is true that aggression intensifies aggression so the consequence of the anger vicious circle is an escalation of violent behaviours. The purpose of preventive measures is, among other things, to stop the spinning wheel of aggression (Rylke, Tuszewski, 2004).

Behaviours in youth, including negative and deviant ones, perform a specific function in a teenager's development. A simple way of coping with frustrated needs and bitter emotions is just giving vent to them by aggressive behaviours. These tendencies are even bigger when a young person experiences a difficult situation and, at the same time, a lack of personal and social skills necessary to cope with this situation (Prajsner, 2003). Preventive measures should be conducted in such conditions so that teenagers' needs could be satisfied in a constructive and, more importantly, non-aggressive way. School provides students with numerous positive and negative experiences. The constant feeling of being controlled and evaluated, activity blocking, perceiving one's situation as a deadlock, can cause deep frustrations, which often become a source of aggression (Sawicka, 1999). Primary prevention, described as anticipatory, belongs to school's tasks in the first place. Its purpose is preventing from social pathology, protecting youth against the risk of social inadaption. These measures include promoting students' own positive social attitudes, correcting their wrong behaviours, creating the atmosphere of trust and safety as well as developing in students the sense of value and taking on responsibility for their own behaviours (Szymańska, 2002; Gwizdek, Sołtys 2002).

Junior high school period is the time when maturing youth exhibit a range of risky and dangerous behaviours, including these connected with aggression. Undeniably, physical or verbal violence often provides students with a form of unconstructive venting their tensions, frustrations and fears (Myers, 2003). Students who feel lost, whose needs are not satisfied in a new school or class as well as in the domestic environment, who are not able to cope with experienced emotions, may react in an aggressive way, causing harm to other teenagers, i.e. to potential victims of peer violence (Piotrowski, Zajączkowski, 2003; Gaś, 1998).

Despite numerous actions performed by teachers and co-operation with family supporting institutions, the problem of verbal and physical aggression still remains unsolved and requires constant monitoring and initiating more effective actions.

Diagnosis and findings

The diagnosis of the problem was conducted by means of a diagnostic opinion poll method, employing the questionnaire technique. The diagnostic study was carried out in two phases at the Group of Elementary and Junior High Schools in the rural environment in Silesia Province. For the purpose of a more detailed diagnosis and to obtain more reliable results providing an image of aggression occurrence, two separate survey questionnaires were used. The study conducted by means of the second questionnaire comprised more extended and checked reliability of previously obtained results as well as provided more comprehensive conclusions and a basis to form adequate, in relation to the recognized situation, preventive recommendations. The research sample selected at random included: 61 students of the first form, 41 students of the second form and 38 students of the third form from the above-mentioned junior high school. In total, there were 140 students, 62 boys and 78 girls, aged 13–16.

On the basis of the obtained findings, it can be concluded that the acts of mutual physical aggression among the students often occur on the school premises. There was not a single person among the students that had not witnessed physical aggression. Over 62% indicated that they had often observed beating and physical violence among students. The respondents also became physical violence victims themselves, 5.7% of them very often, 49.3% seldom. What is worse, the respondents personally became physical and peer aggression offenders. 10% of them became aggressors very frequently whereas 57.9% (mainly girls) had never performed any acts of physical aggression on another male or female student.

Verbal aggression is unfortunately a common problem in the school involved in the study. 70% of the respondents experienced the event of laughing at, teasing and insulting one student by another. There was not a single person among the respondents that had not observed the above-mentioned situation. Nearly 53% of the students personally experienced verbal abuse very frequently, i.e. verbal humiliation or teasing. Only 5% of the respondents had never experienced any occurrence of verbal abuse addressed to them. Nearly 30% of the respondents admitted frequent verbal abuse towards other students at school, whereas only 13.6% indicated they had never teased, insulted or verbally humiliated other students.

Over 30% of the respondents often came cross the event of scrounging money from younger, physically weaker students on the school premises. What is more, 46.4% added that there occurred incidents of abusing younger students by older ones.

48.7% of the teenagers had never witnessed a situation where a student of their school was forced, induced by others to smoke cigarettes, drink alcohol, or take drugs. Nevertheless, 42% personally experienced a situation of being forced to smoke cigarettes, drink alcohol or take drugs.

More than 51% of the respondents felt safe and secure on the school premises involved in the study very often. More than 5% indicated they had never felt safe on the school premises.

In order to estimate the correlation between quality factors, one of which is a person's sex and the other involves taking on the role of a victim / offender in the act of aggression, Yule coefficient was employed (Rubacha, 2008, p. 377):

$$\phi = \frac{ad - bc}{\sqrt{(a+b)(a+c)(b+d)(c+d)}}$$

Yule coefficient can be calculated directly on the basis of the data from the 2×2 chart. If ad=bc, then the factors are independent. If φ=0, there is no correlation between the factors, and if φ=±1, there appears a functional relation.

23 female students admitted being a victim of aggression at school, whereas 55 girls gave a negative reply. In the group of the boys involved in the study, 52 respondents were a victim of aggression at school, whereas 10 boys from the community sample were not.

Chart 1. Have you ever been a victim of aggression at school?

Sex	Yes, I have been a victim of aggression at school (number of replies)		I haven't been a victim of aggression at school (number of replies)		Total (number of replies)	
Girls	23	a	55	B	a+b	78
Boys	52	c	10	D	c+d	62
Total	75	a+c	65	B+d	N=140	

Source: Own research based on conducted surveys.

Applying the Yule coefficient formula it was calculated that φ=0.54. Thus, the coefficient value indicates a tight correlation between a person's sex and taking on the role of a school aggression victim. So a person's sex influences the events concerning taking on the role of a school aggression victim.

Moreover, 8 girls admitted being offenders of school aggression, whereas 70 gave a negative response. In the group of the boys involved in the study 12 respondents assumed the role of an aggressor.

Chart 2. Have you ever been an offender of aggression at school?

Sex	Yes, I have been an offender of aggression at school (number of replies)		I haven't been an offender of aggression at school (number of replies)		Total (number of replies)	
Girls	8	a	72	B	a+b	80
Boys	50	c	10	D	c+d	60
Total	58	a+c	82	b+d	N=140	

Source: Own research based on conducted surveys.

Applying the Yule coefficient formula it was calculated that φ=0.73, which means that the coefficient value indicates a tight correlation between a person's sex and taking on the role of a school aggression offender. Thus, we can state that a person's sex significantly affects assuming the role of an aggressor towards his or her peers.

School aggression may have different forms including those of forcing peers to smoke cigarettes, drink alcohol or take drugs.

Chart 3. Have you ever been forced to smoke cigarettes, drink alcohol or take drugs at school?

Sex	Yes, I have been forced (number of replies)		I haven't been forced (number of replies)		Total (number of replies)	
Girls	8	a	70	B	a+b	78
Boys	51	c	11	D	c+d	62
Total	59	a+c	81	b+d	N=140	

Source: Own research based on conducted surveys.

Applying the Yule coefficient formula it was calculated that φ=0.72, which proves a very tight correlation between a person's sex and forcing other students to smoke cigarettes, drink alcohol or take drugs at school. Thus, we can state that a person's sex significantly affects the situations where students are forced to smoke cigarettes, drink alcohol or take drugs at school.

From among aggressive behaviours enumerated by the students, verbal aggression comes first, namely swearing, nevertheless, there is also a considerable amount of physical aggression related behaviours including beating, spitting or kicking. It may be concluded that the students are aware of violent behaviours very well, and what is more, they notice such behaviours on their own school premises as well as correctly recognize and realize them. Nevertheless, it is cru-

Graph 1. Which behaviours of your male / female class – or schoolmates are aggression related?

Behaviour
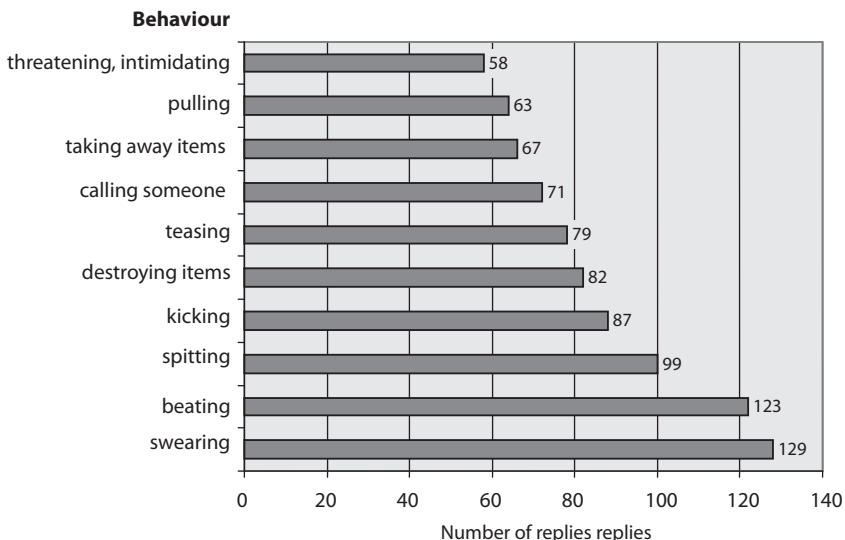
Source: Own research based on conducted surveys

Graph 2. What could you do if you noticed someone from your class or school acting aggressively?
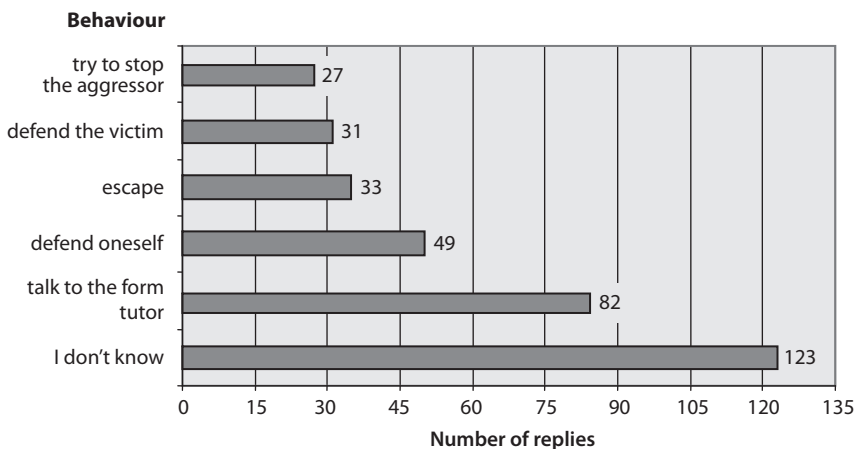
Behaviour

Source: Own research based on conducted surveys.

cial to make teenagers sensitive to the occurrence of any aggressive behaviours including physical and verbal ones to prevent indifference and lack of response to a victim suffering harm.

Based on the gathered data, it can be concluded that the students do not know to a significant extent how they can behave when they notice an occurrence of aggression. Only 22% would decide to defend the victim, whereas 58.5% would seek help and talk to the form tutor. Despite experiencing aggressive behaviours very often, the respondents do not know how to behave or respond or who to refer to for help.

As the gathered data revealed, the students behave aggressively since they want to tease and distress their victim as well as they dislike and feel specific antipathy addressed to the victim. In the opinion of the respondents, school failures and unsatisfied needs also contribute to aggressive behaviours. The replies provide an image of the issue of risk factors perception, i.e. potential violent behaviour causes noticed by students.

Graph 3. Which situations, experiences in your opinion make your friends act aggressively?
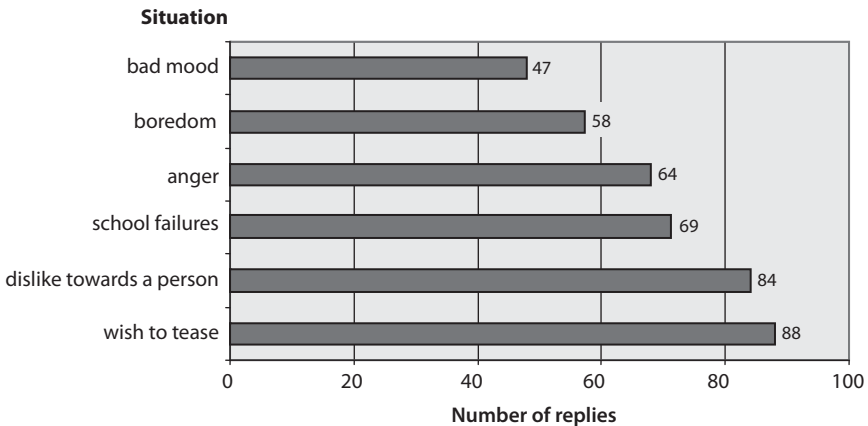
Source: Own research based on conducted surveys.

As the gathered data revealed, the respondents are aware of the causes and motives revealing aggressive behaviours in their peers. The study findings reveal that aggression among students is partially of an emotional, conscious and purposeful character, because it results from personal attitudes and approaches towards a potential victim, which quite often tends to be a sign of social inadaption.

While diagnosing the problem it seems purposeful to learn the students' opinions about ways and possibilities of self-protection and protection of others against acts of aggression. The respondents either do not know or do not have an opinion about the above-mentioned issue. In the teenagers' opinion, the occurring argument of physical force or older and stronger schoolmates is an effective preventive measure which protects against acts of aggression from other students. The occurring conflict avoiding category as protection against aggressive behaviours is an important issue for constructing a preventive programme, as we can plan training of the methods of effective conflict solving with students.

Graph 4. What can best protect a person at your age against peer aggression in your opinion?
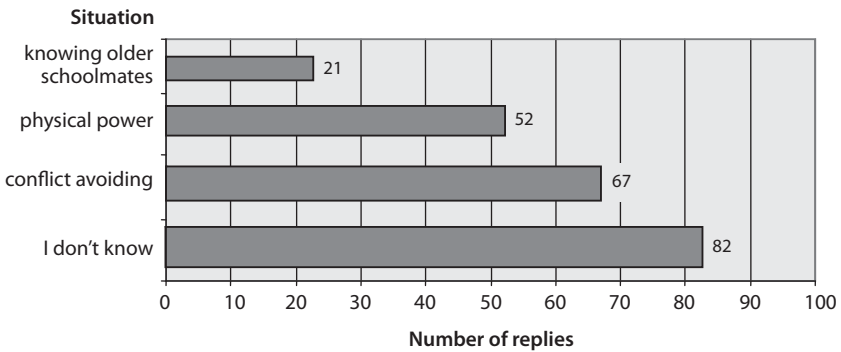
Source: Own research based on conducted surveys.

Graph 5. How can aggression in your school be prevented in your opinion?
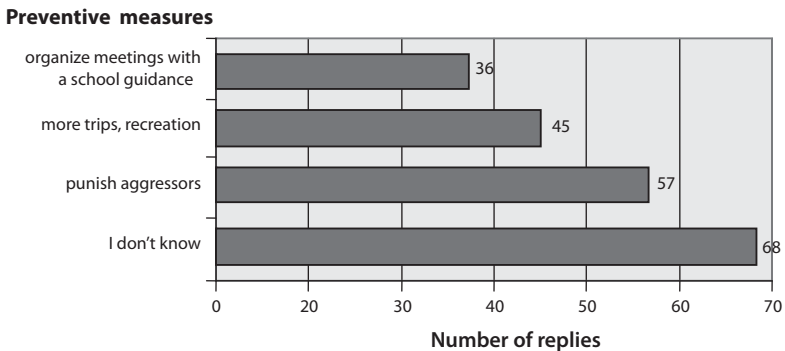
Source: Own research based on conducted surveys.

According to the data, the students do not know or do not have an opinion about aggression prevention. Over 40% of the students suggest punishing aggressors, whereas 32% want to extend the special education functions of school providing students with recreation and rest. Giving vent to tensions and frustrations on a trip, relieving stress in the open air could amount to a preventive measure against aggressive behaviours in the respondents' opinions.

Chart 4. What kind of help could you rely on from your classmates and school employees (teachers, school guidance counsellor and others) if you became a school aggression victim?

Help from friends	No. of replies	Help from school employees	No. of replies
– I can't rely on any kind of help	68	– I don't know	72
– talk, emotional support	62	– I can't rely on any kind of help	49
– I don't know	45	– talk, emotional support	31
– help in a fight, defence in danger	21	– intervention in a school guidance counsellor, headmaster, punishing an aggressor	19

Source: Own research based on conducted surveys.

The diagnosis of help possibilities from peers and school employees seems to be essential in the students' perception. This question describes the school situation of a student among peers as well as allowing us to estimate the sense of security and social support. Unfortunately, nearly 50% of the students revealed they could not rely on any peer support in the event of aggressive behaviour confrontation. 15% of the teenagers stated that this support would be help in a fight, so a counterattack would be a response to physical aggression. 32% do not clearly know what help their peers could provide them in the event of falling an aggression victim.

Over 50% of the students indicated that they did not know what help school employees could provide them with in the event of falling an aggression victim. 35% added that in the event of danger they would not rely on any help from school employees and only 22% predicted they would be provided with support in the form of talk from teachers or other adults.

While conducting the diagnosis it is necessary to recognize what kind of difficulties the students of the classes involved in the survey have to face. Over 50% of them do not know the problems experienced by their schoolmates. In the respondents' perception, nearly 30% of their schoolmates experience school failures, whereas more than 13% experience peer rejection. According to this data,

the conclusions can be drawn that the students know little about the personal situation of their classmates.

Chart 5. What difficulties and problems do students from your class experience?

Experienced difficulties	No. of replies	%
– I don't know	71	50.7
– school failures and difficulties	43	30.7
– hard situation in family home	22	15.7
– Lack of approval, sympathy from schoolmates	19	13.5

Source: Own research based on conducted surveys.

Conclusions

The conclusions drawn from the conducted study comprise valuable suggestions to construct a preventive program, which seems just indispens able in the face of the problem diagnosis:

1. There often occur acts of mutual physical and verbal aggression among students on school premises. Apart from that, incidents of insulting younger and weaker students by their older schoolmates often take place.
2. Over 42% of the students personally experienced being forced to smoke cigarettes, drink alcohol or take drugs.
3. Only 51% of the respondents felt completely safe at school.
4. A student's sex has a very big influence on the situations where students are forced to smoke cigarettes, drink alcohol or take drugs at school. A student's sex also affects taking on the role of an aggressor towards peers as well as it influences the role of taking on the role of a school aggression victim.
5. The students' awareness in the field of the possibilities regarding national responding in the event of witnessing violent behaviours is little, so it is desirable to improve the level of knowledge and skills within effective responding and providing help in the events of aggression.
6. When constructing a preventive program, it is necessary to consider the Reed noticed by the teenagers, to give vent to stress as well as suggestions concerning workshops with the school guidance counsellor. The students indicated here the problem of coping with mental and physical tensions as

well as the need to train the skills of coping with emotions as an aggressive behaviour preventive measure. Alternative forms of relieving tension might turn out to be an effective preventive measure towards the growing number of aggressive behaviours. The preventive program should include exercises enabling junior high school students to train skills of coping with stress and reducing frustrations.

7. It can be claimed that students' mutual support possibilities are not impressive, so it is advisable to improve the knowledge about them and to increase integration both within class and entire school as much as possible. The students should also know each other better, extend their knowledge about themselves and their peers as well as intensify the bonds between them, which should positively affect the ability of providing mutual support and help. Besides, integration among the teenagers as well as building the sense of community should also positively influence the level of the sense of safety and increase the self-help possibilities in junior high school students in difficult situations.

8. It is also advisable to broaden the students' knowledge about the possibilities of seeking support on the school premises, in school employees as well as in the local environment. It is also advisable to consider integration, school employees and students should know each other better, which should also improve the level of the sense of safety in this institution.

9. The level of students' knowledge about self-protection in the situation of falling an aggression victim as well as the awareness of effective ways of aggression prevention is little, so the knowledge and scope of practical skills of junior high school students should be broadened in the above-mentioned areas.

Summary

For the purpose of any preventive measures and their effectiveness, full engagement seems indispensable in the accomplishment of the purposes and assumptions as well as constructive cooperation of:

– students, as direct addressees of the program, – teachers and all school employees who contribute to supporting, maintaining and monitoring the effects of the program, – the parents of the students involved in the program – as the parent, provided with relevant knowledge and skills, can develop desirable attitudes and behaviours of his or her child. (Gwizdek, Sołtys, 2002, p.75). These activi-

ties can be realized effectively and professionally only in co-operation with the above-mentioned persons whereas the educational success is achieved by their activity, engagement and belief in the possibilities of effective preventive measures (Wojciechowski, 2002). The consequence of preventive measures effectiveness is, in the first place, the reduced number of aggressive behaviours in the youth, including the school, home and local environment (Rylke, Tuszewski, 2004). Aggression preventive measures will prove to be effective if the acquired knowledge and skills contribute to better, mainly non-aggressive functioning of the students.

Based on the conducted diagnosis, it appears to be necessary to start systematic preventive measures within aggression prevention in order to develop skills of non-aggressive responding and coping with difficult life situations, minimise (reduce) and thus eliminate aggression-related behaviours and finally raise the socialization level in the students. There has not been conducted any diagnostics study in this school so far, nevertheless the students and the teachers notice the urgent problem of aggression. Currently, preventive measures are realized in the school involved in the study exclusively on the basis of informative strategies, however, on the basis of the study (Szymańska, 2002; Rylke, Tuszewski, 2004) it is educational and alternative strategies that turn out to be effective. Therefore, the implementation of comprehensive and systematic preventive measures seems to be justifiable.

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The New Educational Review

Suicides and Attempted Suicides of Children and Adolescents in the Slovak Republic and Possibilities of Their Prevention

Abstract

The study analyses the rate of suicides committed by children and adolescents in the Slovak Republic. It elucidates statistical data about reported suicides and attempted suicides of children and adolescents over the years 2005–2010. Special attention is paid to possibilities of prevention. The paper is one of preliminary outputs of the project VEGA No. 1/0168/12 Professionalizing Prevention of Social and Pathological Phenomena in the School Environment in the Slovak Republic from the aspect of the social pedagogue profession - present situation, problems and comparison with foreign countries.

Key words: *suicide, attempted suicide, causes and motives of suicides by children and adolescents, prevention.*

Suicide is classified as a social and pathological phenomenon. Suicide means deliberately killing oneself. It is a violent conduct with the intention of ending one's own life. Suicides may be completed as well as attempted. They occur not only in the adult population, but also among children and adolescents. They are a serious educational problem not paid appropriate attention to in terms of prevention.

P. Ondrejkovič (2000, pp. 172–173) mentions several types of suicide:

1. Demonstrative – they are typical of women and young people, they are coercive in character. In their background there is an endeavour to reach a certain goal or a distress call. The person is not fully determined to die; he/she wishes to be found.

2. Balance sheet – they represent a way out from a seemingly insoluble situation, for instance during a difficult disease, at the loss of life perspectives and the like. A special kind of balance suicide represents intentional suicide of drug addicts that are accompanied by heavy depression.

3. Ritualized – they are typical of oriental religions and cultures, such as hara-kiri, kamikaze, collective suicide of religious character, etc.

4. Escapist – they are called out by the fear of death, by intolerable pain, punishment, social degradation and other reasons.

5. Auto-punitive – they hold the character of self-punishment. They bear the form of auto-aggression. They can be linked to mental diseases as well (depression, schizophrenia and the like).

In general, it is true that the occurrence of suicide grows with age (Fischer, S., Škoda, J., 2009, p. 63). However, one of its peaks appears already with young persons at the age of 15–24 (Kochanek, K. et al., 2004). Suicide has been reported for many years as the second or third most frequent cause of death in adolescence (Joiner, T.E., Rudd, D.M., 2002).

Suicides and attempted suicides by children and adolescents in the SR from 2005 to 2010

We shall focus more closely on suicides by children and adolescents in the Slovak Republic. Table 1 shows numbers of reported suicides and Table 2 attempted suicides by age and gender. Of course, it is necessary to take into account certain latency of suicides and attempted suicides (e.g. hidden suicides and attempted suicides under the influence of addictive substances).

Over the years 2005–2010 children and adolescents committed attempted as well as completed suicides. The data in Table 1 show the occurrence of suicides in the age category under 14 in 2006, 2007 and 2010. In terms of gender, the studied period includes solely suicides by boys. The age category 15–19 includes a higher number of suicides. The lowest number is in 2006 (13 completed suicides) and the highest in 2008 (up to 25 suicides). As for the gender, the male one prevails again, but there are also suicides by girls or young women (up to 6 in 2008).

The numbers of attempted suicides are higher when compared with the completed ones. They occur every year also in the age category under 14; from 2005 to 2010 the most attempted suicides were in 2007 (26) and the fewest in 2009 and 2010 (11 in each). Attempted suicides significantly prevailed with girls. In the age category 15–19 the most of attempted suicides were reported in 2005 (121) and

the fewest in 2009 (76). Again, girls prevailed, but less significantly than in the age category under 14.

Table 1. Number of reported suicides by age and gender
over the years 2005–2010

Years	Age group 0–14			Age group 15–19		
	Boys	Girls	Total	Boys	Girls	Total
2005	0	0	0	15	2	17
2006	4	0	4	10	3	13
2007	3	0	3	13	2	15
2008	0	0	0	19	6	25
2009	0	0	0	13	2	15
2010	3	0	3	12	5	17

Processed by: Samovraždy a samovražedné pokusy v SR 2005 až 2010 (Suicides and Attempted Suicides in SR 2005 to 2010). Available at: www.nczisk.sk/Publikacie/ Edicia_Zdravotnicka_statistika/Pages/default.aspx

Table 2. Number of reported attempted suicides by
age and gender over the years 2005–2010

Years	Age group 0–14			Age group 15–19		
	Boys	Girls	Total	Boys	Girls	Total
2005	4	9	13	48	73	121
2006	6	16	22	39	67	106
2007	9	17	26	48	49	97
2008	2	17	19	42	54	96
2009	3	8	11	36	43	79
2010	1	10	11	40	46	86

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There are many motives for suicide, but the most frequently it is a response to a difficult situation from which there seems to be no way out. Among children and adolescents, suicide as a "short-circuit" reaction prevails. Risk situations and events that may be an impulse for attempting or committing suicide are the following (www.zdravie.sk/sz/content/769–44350/prevencia-samovrazdy-samovrazda-a-adolescenti.html):

- Situations experienced as hurting (although objectively they need not be assessed as such);
- Quarrels in the family;
- Separation from friends, partners or school fellows/mates;
- Death of a beloved person or any other person significant for the child or adolescent;
- Termination of a love relationship;
- Interpersonal conflicts or losses;
- Problems with the law or discipline;
- Pressure by a peer group or friends´ self-destructive patterns;
- Bullying;
- Dissatisfaction with school achievements and failing in studies
- High demands at school during the examination period;
- Unemployment and bad financial situation;
- Unwanted pregnancy;
- Serious physical illness or contracted venereal disease;
- Natural disaster, etc.

According to J. Hroncová (2007, p. 50) "the motives for committing suicide and attempting suicide among children and the youth are often problems in family, especially neglecting, or mistreating of children, imperfections in upbringing, problems at school (school failures, chicanery), emotional and health difficulties, burdening situations and other reasons." As stated by P. Ondrejkovič (2009, p. 360) "motives for suicide in childhood and adolescence are concentrated especially on interpersonal relations. The most frequent are conflicts in the family environment, divorce, separation, death of one or both parents, significant change in the family environment and the child's social isolation, failure at school, disappointed love." Tables 3 and 4 show motives for reported and attempted suicides by persons under 19 years of age over the years 2005 to 2010

Table 3. Motives for reported suicides by children and adolescents from 2005 to 2010

Alternatives	Age	2005	2006	2007	2008	2009	2010
Conflicts and problems in the family	0–14	0	0	0	0	0	0
	15–19	1	0	1	0	1	0
Conflicts and problems at school	0–14	0	1	0	0	0	0
	15–19	0	0	0	0	0	0
Relation to a somatic disease, handicap	0–14	0	0	0	0	0	0
	15–19	0	0	1	0	0	0

Alternatives	Age	2005	2006	2007	2008	2009	2010
Other inner personal conflicts and problems	0–14	0	0	1	0	0	0
	15–19	1	0	0	3	1	1
Unknown motive for the act	0–14	0	3	2	0	0	3
	15–19	15	13	13	22	13	16

Processed by: Samovraždy a samovražedné pokusy v SR 2005 až 2010 (Suicides and Attempted Suicides in SR from 2005 to 2010). Available at: www.nczisk.sk/Publikacie/Edicia_Zdravotnicka_statistika/ Pages/default.aspx

Table 4. Motives for reported attempted suicides by children and adolescents from 2005 to 2010

Alternatives	Age	2005	2006	2007	2008	2009	2010
Conflicts and problems in the family	0–14	5	13	11	12	8	3
	15–19	45	47	40	40	30	15
Conflicts and problems at school	0–14	5	3	10	4	0	5
	15–19	24	6	9	7	5	26
Conflicts and problems at work	0–14	0	1	0	0	0	0
	15–19	0	1	3	0	1	1
Conflicts and subsistence problems	0–14	0	0	0	0	0	0
	15–19	4	3	2	2	2	1
Conflicts and erotic problems	0–14	2	1	2	0	0	0
	15–19	11	11	2	5	4	2
Conflicts and problems related to public interests	0–14	0	0	0	1	0	0
	15–19	2	0	0	0	0	1
Relation to a somatic disease, handicap	0–14	0	0	0	0	0	0
	15–19	1	0	0	1	2	0
Unintelligible motivation	0–14	1	0	1	0	1	0
	15–19	4	11	7	5	7	7
Other inner personal conflicts and problems	0–14	0	3	2	1	1	3
	15–19	24	21	27	32	27	27
Unknown motive for the act	0–14	0	1	0	1	1	0
	15–19	6	6	7	4	1	6

Spracované podľa: Samovraždy a samovražedné pokusy v SR 2005 až 2010 (Suicides and Attempted Suicides in SR from 2005 to 2010). Available at: www.nczisk.sk/Publikacie/Edicia_Zdravotnicka_statistika/Pages/default.aspx

The statistical data from 2005–2010 show that unknown motives prevail in completed suicides. Attempted suicides are most frequently motivated by problems and conflicts in the family and at school; in the age category 15–19, also conflicts and erotic problems occur more frequently.

The majority of children's attempted suicides is an expression of fear and an attempt to escape some kind of threat, e.g. punishment. This is connected with more frequently attempted suicides during distribution of reports. Risk factors at this age are problems at school and in the family. The impulse for adolescents´ suicidal conduct is usually a feeling of disappointment and despair when facing a bigger problem or failure for the first time in their life. In this age period attempted suicides are frequent, which may be interpreted as an emotionally strained way of a distress call. As for the methods of committing the act, the following occurred in completed suicides in the studied period (according to ICD-10 there are 25 methods of suicide):

- Intentional self-poisoning by and exposure to non-opioid analgesics, antipyretics and antirheumatics (X60);
- Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substances (X64);
- Intentional self-poisoning by and exposure to other gases and vapour (X67);
- Intentional self-harm by hanging, strangulation, and suffocation (X70);
- Intentional self-harm by hand-gun discharge (X72);
- Intentional self-harm by riffle, shot-gun and larger fire-arm discharge (X73);
- Intentional self-harm by smoke, fire and flames (X76);
- Intentional self-harm by sharp object (X78);
- Intentional self-harm by jumping from a high place (X80);
- Intentional self-damage by jumping or lying before a moving object (X81);
- Combined method of committing the act.
- Over the period 2005–2009, each year there were cases of suicides by persons under 19 by hanging, strangulation and suffocation (X70) and by jumping or lying before a moving object (X81). Also suicides by shooting (X72) and jumping from a high place (X80) were frequent.

Prevention of suicides in children and adolescents

Suicides as well as attempted suicides are serious phenomena occurring also among children and adolescents, thus it is necessary to pay attention also to their prevention.

As stressed by J. Hroncová (2004, p. 146), prevention of suicides - thus ensuring that they do not happen - requires an interdisciplinary approach. P. Ondrejkovič (2000, pp. 176–177) states in this connection: "Because suicidal behaviour especially among the youth, represents a complex and multi-factorial phenomenon, many authors refer to non-existence of a narrowly specialised prevention and therapy of suicide mainly because the answers to hundreds of questions about the reason for suicide could be only given by the one who died and we cannot ask him/her any more. Therefore, only by knowing general reasons, social as well as psychological, and individually spiritual as well, which can lead to suicide, it is possible to intervene into these conditions and try to prevent suicide. The interventions, however, must be of complementary character, both individual and macro-social, in order to increase the probability of their effectivity when saving the highest value in society represented by human life."

As further stated by P. Ondrejkovič (2000, p. 173), in the case of suicides by adolescents certain signs are reported, which may be observed in advance. Within the prevention of suicides it is important for teachers to recognize them. Such signs include indifference and resignation in response to requirements for performance, depressed moods and signs of apparent loss of will to live, withdrawing from groups of friends, inability to consciously cope with and overcome problem and stress situations.

According to F.M. Bertolote (2007, p. 16) any sudden or dramatic change with an impact on pupil achievement, school attendance or behaviour should be taken seriously. It includes: loss of interest in usual activities, overall worsening of school achievement, reduced diligence at school, inappropriate behaviour in the classroom, unexcused or repeated absence from classes, abuse of legal or illegal drugs, incidents involving police intervention.

Within pupil suicide prevention, J. Kocourková (2007, pp. 107–108) specifies risk and protective factors of the pupil, in the family and in relation to the social environment. The aim of suicide prevention should be influencing them. Pupil risk factors may be mood disorders, behavioural disorders, abuse of addictive substances, unsatisfying interpersonal relations or traumatic experiences. Pupil protective, thus preventive, factors are a positive temperament, good intelligence facilitating adaptation to changes as well as physical health and able-bodiness. Risk factors in the family may include such situations as divorce of parents, violence in the family, alcohol or other abuse by parents, psychiatric disease, as well as parental criminality, cruelty to children and their sexual abuse, suicidal behaviour, even completed suicide or threatening with suicide by a close person. Protective factors in the family are harmonious family conditions, appropriate upbringing by

parents, child support and a close empathic adult within easy reach. Risk factors of the social environment overlap those of the family (dysfunctional family, low social status of the family, loss of employment by a parent, frequent moving of the family); they include also bad adaptation at school, closeness of tortious groups including access to drugs, the value and significance of suicidal behaviour in the peer group, the way the suicidal behaviour is presented in the mass-media. The following may be considered as protective factors: good school, available out-of-school activities of quality, access to work-places focused on help to children and adolescents in a situation of crisis.

Prevention of suicides by children and adolescents includes three levels: primary, secondary and tertiary prevention.

Primary prevention - focuses on children and adolescents of elementary and secondary schools. This prevention is accomplished especially by the family, school, mass-media, etc. At school, special attention should be paid to pupils from dysfunctional families, risk families, drug consumers, underachievers, ostracized pupils, socially isolated pupils. Increased attention should be paid to the issue of suicide at the time of report distributions. Here, prevention coordinators at elementary and secondary schools, as well as class-teachers and mass-media play an irreplaceable role. According to J.M. Bertolote (2007, pp. 18–20) it is necessary at school to increase pupils´ self-respect, to encourage them to show emotions, prevent bullying and violence; whereas communication based on mutual trust is also important.

"Pupils' interest activity realized at the after-school time should be also considered as an effective form of prevention. Long-range positive interests can meaningfully remove stress and psychical burden of pupils. Increasing frustration tolerance and the ability to adequately solve life situations belong among the essential tasks of primary suicide prevention." (Hroncová, J., 2007, p. 52).

Secondary prevention - focuses on those who are about to commit suicide. Secondary prevention requires professional assistance by psychiatrists, psychologists and other specialists.

Tertiary prevention - focuses on survivors of attempted suicide. The essence is to teach the person to overcome difficulties in life, find a new sense in life (J. Hroncová, 2004, pp. 148–150). Tertiary prevention is primarily a matter of psychiatrists, immediately after attempted suicide, and later involves also other specialists.

An important role in suicide prevention is played by crisis lines, often representing a contact between the adolescent in a problem situation and specialists who can provide help. Therefore, it is useful to publish crisis line numbers at school, e.g. on notice boards.

Within suicide prevention it is suitable to restrict access to their means such as guns and medicines. Also, it is necessary for teachers and other professionals working with pupils of elementary and secondary schools to be trained in identification of the risk of attempted suicide and in the appropriate response to suicidal behaviour.

These days a requirement is emphasized to professionalize prevention in the school setting, particularly through proficient experts, where a social pedagogue at elementary and secondary school should be especially highlighted. Professionalizm is inevitable also in suicide prevention.

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Parents' Participation
in Leisure Time Activities of Their Preadolescent Child.
Model approach

Abstract

The article is a presentation of the results of the level of parental involvement in leisure activities of their preadolescent children. The study covered such aspects of parental care as providing an adequate time off, involvement in leisure activities organization, control and common recreation. The results confirmed that a key roles as determinants of the level and extent of parental care are played by: the level of parents' education, their workload and financial condition. The study also made it possible to create three models of parents' participation in children's leisure: support and bilateral cooperation, paternalistic control and separative model.

Key words: *leisure, free time activities, parental care.*

1. Introduction

A person at the preadolescence stage of development is in many respects an autonomous individual, however, the specificity of this developmental phase makes parents take care of their daughter's or son's free time in a manner which is reasonable and adapted to concrete situations. Despite undoubted benefits of spending free time together, parents should remember that an adolescent craves to fulfill the need for emancipation from direct supervision. The freedom of choice in undertaken activities is a constructive feature of leisure time. Therefore, parents should allow a young person to come up with invention and independence in managing free time. Parents have to limit their suggestions or interventions to

situations which are essential from the educational point of view. Probably the most difficult task is to make a teenager perceive parents as still attractive free time partners and make them want to spend part of their free time together.

2. Method

The basic method used in the research was questionnaires for children and parents, containing closed and open questions. The survey covered 156 randomly selected families with children between 10 and 12 years of age. The survey, carried out at the beginning of 2011 in Wrocław (a city of more than 500 000 inhabitants), confirmed the regularity which was determined in analogous surveys (M. Biedroń, 2006) – the education level of parents, workload and the material standing of the family have the key impact on the role of parents in the organization of teenagers' leisure time. These factors create a syndrome variable of the components which affect each other. Longitudinal studies prove that these factors show quite strong historical constancy. Analysis of the collected research material including the differentiating impact of the syndrome variable allowed for determining three models of parents' participation and using free time: model of support and bilateral cooperation, model of paternalistic control and a separative model.

3. Models of parents' participation.

a. Support and bilateral cooperation model

In this model more numerous were fathers and mothers who boasted a high level of education, lesser workload, of diversified material standing and parents with secondary education assessing their financial standing as good and loaded with duties within acceptable levels. Both spouses were equally involved in the organization of the teenager's free time. Intensification of sexual maturity may cause more or less distancing or even rejection of one of the parents, as an inappropriate companion for leisure activities. In this group there were no incidents where a son or daughter distanced from a parent of the opposite sex in a radical manner. If there were any preferences concerning the company of one of them, the choice was driven by skills, not sex. The teenagers from the discussed group raised significant reservations. Almost 10% of the girls and boys had a 5-hour free time on school days at their disposal, whereas the substantial majority declared approxi-

mately 3.5 hours. Both the parents and children put it down to school duties and additional classes, particularly a vast amount of homework assigned by teachers. Almost all the parents perceived the situation as inappropriate but at the same time concluded that they were helpless in this respect and they could not change the situation. Participation of the parents in the organization of free time was mainly performed by suggesting activities, ensuring appropriate equipment, transport and care and also balanced personal participation in particular forms of activity. As regards the children, the leisure activities mainly included out-of-doors activities. The parents stressed the fact that for the children after being stuck in schools for many hours, movement is very important for the "body and psyche". A significant number of the teenagers took part in different recreational and sporting events under the supervision of a professional instructor. In the parents' opinion this form of activity combined three significant elements: possibility to let off physical energy and defuse stress, enhance specific abilities and ensure child care. Other popular forms of creative and expression activities comprised: dancing, acting, art, handicraft, and literary writing. In the parents' opinion it was important for the children to develop their artistic sensitivity which helped them understand the world of culture. Pre-adolescent children are characterized by intense experiencing of different events of everyday life. Often social regime does not allow, e.g., letting off tensions therefore, in the parents' opinion participation in this type of activities is a so-called *"safety valve"*. The parents also appreciated the value of free time organized by informal peer groups in the neighbourhood thereby providing a discreet care over a teenager they refrained from exaggerated interference in activities and peer relations. The parents' statements proved that free activity within a peer group was a natural way to socialize, acquire social competences. From the educational point of view it was important that parents were favourably inclined to have their son's or daughter's friend staying at their house. Even at the cost of commotion or mess, in their opinion it was worth getting to know their own child's play mates "*in a natural way*". Consent to such a visit and involvement in preparations is a perfect way to show their children that their needs are treated seriously and that they are full members of the family. In the coordinated cooperation model the aspect of joint leisure time of family members is interesting. Firstly, a wide variety of activities is in place: joint excursions and everyday recreational and sporting activity, hobbies, participation in cultural events, watching films, TV programmes and social meetings. Secondly, all the members of the family are involved in planning, organization and realization. Thirdly, there were situations of "role-switching" when an adolescent boy or girl acquired the role of a leader taking care of other members of the family. The intention of the parents who were involved in this sort

of situations was to create an atmosphere of closeness and unity while supporting the development of independence of an individual, the sense of authorship, active involvement in tackling various problems. The survey confirms that using modern media is an extremely popular way of spending free time for which it is hard to find an equally attractive alternative and at the same time the weakest link of parental care. The surveyed parents indicated that it was very difficult for them to apply basic control over what their son or daughter was playing or watching. Even though certain limitations concerning time or content were applied at home there was no certainty that the child would not violate the prohibition when he/she stayed at home alone or was paying a visit to a friend whose parents were more liberal. Therefore, the parents' ability to monitor this sphere of leisure time was greatly limited. The carers admitted that they also had a problem with the pressure of the environment, which they could not handle. Many parents who faced this uncomfortable necessity assumed a strategy of encouraging children to watch certain films, programmes or play certain computer games by showing them their senselessness and deprecating their intellectual, ethical level. Other parents proposed a range of alternative actions, to be selected from by the teenager. Merely a few fathers admitted that they loved this sort of leisure and took part in it together with their teenage sons. However, there were no instances that the time spent surfing on the Internet and playing computer games exceeded 15 hours per week. Social portals attracted great interest and were popular among the girls who would eagerly spend more time visiting them without their parents' supervision (the average for this group amounted to approximately 10 hours per week). The statements of the fathers and mothers who represented the bilateral cooperation model proved that in their opinion the best method of transferring attention and interest of their son or daughter to other activities was providing ideas and (what they increasingly stressed) setting a good example.

b. Paternalistic control model

The most dominant group in this model was represented by families with average education and financial standing, as well as with higher education, who shared a level of workload within norm. A characteristic feature of the model was a relatively high number of unemployed mothers. The majority of the professionally active women devoted considerably less time to their professional responsibilities than their husbands did. Typically in this model, the teenagers were treated as very immature individuals, unable to make autonomous decisions, rather as objects than subjects of care. Despite the fact that the parents were guided by noble motives, wanted to raise an "exemplary" boy or girl and to protect them from the danger of

the metropolitan environment, it is hard to name such conduct differently than successive strengthening of teenagers' dependence, creating attitudes of learnt helplessness, and even depriving of subjectivity. The parents affirmed their will to organize and participate in their child's leisure; however the mothers were more active in this sphere. A significant element of parental care is ensuring that a young individual has sufficient time for leisure. The considered group featured the biggest number of unsatisfied needs in this respect. Almost 80% of the girls and boys admitted that they did not have more than 3 of hours spare time a day. A few reasons for this situation were revealed in the statements of the young respondents. According to the definition, activities taken during spare time should be of voluntary character. However, in the case of this group it was not so. The parents guided by a conviction of the superior value of intellectual development, suggested or imposed activities which had primarily educational purposes: acquisition of foreign languages, school subjects, music lessons, ballet, and less frequently sports. Combined with a high amount of school duties, they created in the teenager a sense of a very limited amount of time for leisure. The doctrine of the superiority of activities carried out in educational institutions, and, first of all, a sense of security, makes parents intensify organizational efforts in such a way that most of the free time is spent under the guidance of teachers, instructors and tutors. Constant adult supervision, tasks conducted according to imposed scenarios, and children's limited choice, strengthen a sense of fatigue and insufficient spare time. In the described model, the parents did their best for their child to have an opportunity to take part in numerous cultural events. However, rarely could the teenager participate in any such event without adult supervision. This is understandable if a particular event, film, or performance is far from home, but if it takes place almost "across the street", direct supervision seems to be quite an exaggeration. The varied educational status of the parents was reflected in the selection of activities. In the intellectual circles, participating in specified forms of cultural transmission required a rather high level of competencies and appealed to the expectations of the parents rather than the children. This could of course stimulate personal development of the young individual, but also it could produce a sense of fatigue or even irritation. In the families with an average level of education the selection of content was sometimes even below the normative limits specified for this age. Some of the children did not at all participate in any additional classes, and seldom visited cultural facilities stating that the parents had no time for them, or that *"nothing interesting was going on in the city"*. Possibly, the parents did not have enough time or will to make proper selections, and their "helpless" child, for whom the parents always made decisions, was unable to show initiative and passively waited for ideas from others.

Differentiating the influence of the parents' education was also noticeable in terms of the use of the media in leisure time. There was a clear polarization of the attitudes of the parents and teenagers. The children of intellectuals represented a group in which time spent watching TV and using the computer was the lowest in the whole population (7–8 hours per week). As indicated by the analysis of source materials, the teenagers who were absorbed in other activities simply had no time for those. Most of the girls and boys declared reading books as one of their favourite forms of leisure and could name many titles that were not on the school reading lists. Even the less wealthy parents willingly financed new books and spoke about their children's passion for reading with great satisfaction. The same was true about certain types of magazines, or so-called collector's magazines (e.g. on natural world, different historical periods, or with scale models, etc.). A few of them also declared interest in social and political articles, which they found in press read by their parents. A different attitude is presented by the families with an average level of education. As far as the use of the media in the organization of free time is concerned, knowledge about the time that the teenagers devoted to the media and what interested them was scarce. Apparently, the parents who compulsively protected their children perceived no harm or danger resulting from the media. The children, without relevant limitations, could watch TV programmes even at night hours, as many of them had their own TV set in their rooms and could use it even if the rest of the family members were asleep. Monitoring of computer games and the time spent surfing on the Internet were some of the weakest points of parental care. Only a few parents stated they had installed filters preventing access to undesired websites, and even protected the computer with a password. Similarly, few admitted that they played computer games together with their children, got excited about the results, failures and successes. In their statements, the carers expressed a sense of guilt, but immediately they justified themselves by the fact that they devoted so much time to their children that they deserved some rest; they underestimated the harmful influence of morally dubious content, or explained that *"my kid also deserves some kind of entertainment"*, and apart from that *"everybody does that"*. In the described group informal contacts with peers looked equally bad. The parents without hesitation allowed their children to invite friends over, and even got involved in such visits. However, the children had no possibility to invite whoever they wanted, as the parents made selections and divided their friends into "appropriate" and "inappropriate" categories. During the visits, not even trying to be discrete, they checked on the children, suggested activities, made comments and corrected behaviours. The imperative of continuous monitoring of the behaviour of "immature teenagers" made parents treat spontaneous leisure in the

company of peers with reluctance. The statements suggested irrational concern about the son or daughter, which affected the need for continuous checking by mobile phone, specific update on information on what the child was doing and with whom, suspecting groundlessly that without monitoring young people would surely undertake dangerous and/or immoral actions. Occasional trips outside of the city were used as a kind of compensation, as activities in the open air. In the discussed type, they constituted quite a popular form of family recreation. In fact, the parents tried to fill the teenagers' free time with tasks that were at the same time pleasant and useful; however, involvement of the teenagers in planning and preparation was very low or non-existent. The parents ascribed a high value to it and considered it as an opportunity to acquire knowledge about the world, getting to know oneself and each other, taking care of family bonds, but at the same time they treated it as their parental duty. Phenomenological analysis of the statements suggests that the primary connotation that the adult respondents ascribed to this activity was a duty, resulting from the fact of being a parent, a spouse, and only later as a way of recreation. It turned out that a strong emphasis on the teenagers spending their free time refining certain abilities, wisely organized, not affected by reckless activities which gave no measurable outcome, suddenly caused the effect of a phenomenon that McCannell ironically called "utilization of free time". (D. McCannell, 2005). Free time loses its hedonistic dimension and becomes a task.

c. Separative model

The most numerous group in this model consists of parents with low and average education levels, declaring less favourable material situation and excessive workload. Work overload and poor material standing trigger a subjective sense of injustice and social handicap. This condition makes parents concentrate on their own need for rest, and keeping distance from the needs of children who generate additional stress and fatigue. In the researched type, we dealt with the traditional division of roles between a wife and a husband. Limited personal responsibility for care and educational tasks consequently resulted in the parents willingly letting grandparents, older siblings, far relatives or educational facilities, carry out tasks related to the organization of free time, or allowing their children to be entirely independent in that matter. As part of the organization of leisure, the children manifested a high level of self-reliance resulting from the fact that they could rarely depend on their parents for support. In comparison with other models, the relatively high amount of free time that the boys and girls had (above 60% of the children had 5 hours of spare time on school days) was not the result of intentional proceedings but rather a lack of discipline in carrying out school duties. Little

involvement of the carers in the recognition of locally offered ways of spending free time made the children's participation in organized forms of leisure relatively small. Financial difficulties posed additional problems. Some children stated that they were forbidden to take part in activities as a form of punishment for poor grades at school. Empirical evidence revealed that this was rather an excuse, as the said prohibition neither induced efforts to improve grades, nor mobilized the carers to help the child. Almost 15% of the children participating in sports, dance, and musical or art classes used charge-free forms proposed by the school, local cultural-educational facilities, parish, or owed that to the suggestions and funds of grandparents, older siblings or godparents. In a few cases the fathers and mothers did not even realize that their child participated in any classes at all. It was up to the invention of the teenagers to decide how they filled their free time, and even their daily schedule. Limited financial resources, no persons to provide suggestions or inspiration made the recreation of the boys and girls mainly focused at home and the neighbourhood. In many cases I highlighted the advantages of free time spent with peers in a backyard area, but the statements of the young respondents expressively suggested that in their case this freedom exceeded any reasonable limits, development norms, and even safety rules. It turned out that the awareness of almost complete lack of supervision negatively influenced by the social control atrophy, led children not only to actions futile in the sense of development, but even pathological ones, such as aimless wandering around the city (at a considerable distance from home), stealing fruit from allotment gardens, risky and dangerous sports, drinking alcohol, smoking cigarettes and soliciting money. However, the parents excused their evident pedagogical negligence stating that at the moment when their child went out there were no other family members at home, or that it was pointless to ask what they were doing because the child could always tell a lie. With all due respect towards individual subjectivity of a young individual, we cannot give too much credit to his/her ability for self-control, risk evaluation, or anticipation of consequences, which even in reasonable girls and boys who act as a group may be replaced by recklessness and a desire to impress others. The attitude of the parents towards visits of friends was here different from the other types. Tolerance concerned mainly such situations when the teenagers locked themselves in a room and did not disturb other family members. The satisfied parents did not inquire what their son or daughter was doing with friends. The sole fact that the child was at home and *"did not wander around"* was for them a proof of their parental competences, and the fact that *"he/she was busy and did not disturb us"* was satisfactory enough. They also highlighted that the daughter or son could not invite friends over when no adults were at home, although the responses of

the teenagers proved that this rule was regularly broken. In the separative model, family recreation was often neglected. Only from time to time, family leisure was organized in such a way as to please all the family members. Usually one side found that time as wasted. It should be noted that rare activities resulted not only from a tendency to separation of the parents and children, but also separation in terms of sex. The deeply rooted stereotype which divided tasks and entertainment into male and female ones often made it hard to find a satisfactory compromise. The children from this group rarely visited culture promotion facilities. No inspiration from the parents combined with limited financial resources were the reason why the virtually one and only place where the teenagers went apart from mandatory school outings was the cinema. Participation of the boys and girls in cultural activities was basically a mirror image of the patterns provided by the parents. The key factors were unlimited and uncontrolled TV shows and spending many hours in front of the computer screen viewing favourite sites, chatting and playing games. This was also the most popular way of spending "common" free time in this group. It happened that the children and parents fought over the choice of TV channels or access to the computer. Both the carers and the children found it satisfactory when each of the family members had their own TV set or computer, as then *"nobody disturbed anyone, and everyone could do what they wanted to"*. Apart from the fact that parental control in such conditions was nonexistent, it was evidence of deep atrophy of family bonds and dangerous isolation of individual members of this micro community. Pattern-setting family influence was also reflected in the taste for reading books. Almost 2/3 of the teenagers from the studied model did not read anything from outside of the school reading list; the rest had read at most one additional book during the last two months. The parents even provided their sons and daughters with various publications, but without their own example they were unable to inspire a passion for reading. In some families, beautifully published albums, guides, atlases, and works of literature were treated as mere decoration and a way of raising prestige, however their usage was minimal. The children aimed primarily at easy-to-read adventure and travel stories and novels of matters describing events and moral problems typical of adolescence; comic books and youth magazines were equally popular but their content was of dubious intellectual value.

Conclusions

For many years the issue of leisure has been of interest to professionals in many fields. However, the results of research conducted on this basis still have too little influence on the practice of teaching, especially implemented in primary groups. The studies allow us to identify two strategic reasons for this. In many cases, deficits or abnormalities of parental involvement in teenagers' recreation are the result of insufficient knowledge about the developmental characteristics and the associated needs and opportunities, as well as underestimating the values of free time in human development (biological, social, cultural, intellectual, moral). But it turns out that an equally important role is played by good will and competence of parents in overcoming various, real or imaginary, obstacles to joint use of leisure time. Certainly, we should attract special attention and efforts to improving the pedagogical knowledge, promoting the value of family recreation and create objective opportunities towards this, because it is the type of investment that benefits both the contemporary (family cohesion, the atmosphere of family life, prevention of negative behaviors, the experience of subjectivity) and future generations (reproduction of specific models of family life).

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A Study on Factors Affecting the Self-efficiency of Human Resources in Educational Organizations

Abstract

This study was done with the aim of investigating the factors affecting the self-efficacy of human resources in educational organizations.

The research population, composed of all the administrators of educational units in Karaj, in the school year of 2010–2011, amounted to 750 participants. The sample included 254 subjects, selected according to stratified random sampling on the basis of Morgan's table for determining the sample size. The data collection tool was a questionnaire prepared by the researcher himself and its validity was confirmed by 30 experts, and its reliability was calculated on the basis of Cronbach's Alpha and was 0/86.

The obtained results of data analysis reveals that there is a significant and meaningful relationship between emotional states and physical development, the use of verbal or social inducements, the use of an alternative experience, and an emphasis on successful experiences of human resources in educational organizations, and their efficacy.

Key words: *self-efficacy, human resources, educational organizations, emotional states, verbal inducements, alternative experiences, successful experiences.*

Introduction

Human beings from the beginning until today, have always tried to know themselves, their abilities and talents by which they could, in turn, change their environment. Meanwhile, self-analysis was more considered. Self-analysis not only

helps individuals to enhance the understanding of themselves and to manage themselves better, but also in this way, they acquire the ability to understand individual differences. If the individual believes that he cannot achieve the expected results, or that the unacceptable behavior cannot be prevented, his motivation for work will be diminished. Although there are other factors as triggers of human behavior, they all have roots in individuals' beliefs.

Based on Bandura's social learning theory, belief in personal efficacy affects people's choices. People tend to have jobs in which they feel capable and confident, and they avoid the jobs for which they do not have enough ability. Self-efficacy beliefs determine how much energy people spend on their own activities and to what extent they resist the barriers (Pajares, Schunk 2001).

Facing mental complexity is being motivated and controlled by many human behaviors and the self-influence mechanisms. Among all the self-influence mechanisms none is more important or inclusive than the belief in personal efficacy (Bandura, 1997).

Self-efficacy is the foundation for developing other management skills. In fact, there is an interesting paradox in human behavior, and it is this fact that by knowing ourselves we can know others and by knowing others we can know ourselves better. Man's success in achieving a better personal and social life and optimum organizational performance depends on identifying strengths, weaknesses and his managerial abilities and capabilities (Alvani, 1992).

By analyzing the factors affecting the efficacy of managers we can provide them with the conditions of knowing such factors and in turn reinforce their own beliefs, and by using verbal persuasion, direct experiences, alternative experiences, or physiological states, or any other method, the managers' self-efficacy beliefs will be impressed and they can have true judgments about their abilities (Bandura, 1981).

Bandura (2000) believes that self-efficacy is a productive ability, through which cognitive skills, social, emotional and human behavior for different goals can be organized effectively. In his viewpoint, having knowledge, skills, and their previous achievements, are not good predictors of future performance. It is in fact the individual's belief in their abilities that can be effective on their performance. There is a clear-cut difference between having different skills and the ability to combine them in appropriate ways to do the variety tasks in different situations. In what follows, we are to review the results of some studies in this regard.

Studying the relationship between self-efficacy and effectiveness of leadership among managers in educational units, Nosrati (2008) presented a significant and meaningful relationship between self-efficiency and effectiveness of leadership in educational and training units.

Enayati (2003) studied the relationship between managers' self-concept and their performance in educational and training units and revealed that there is a significant and positive relationship between managers' self-concept and their performance.

A›rabyan (2004) analyzed the impact of self-efficacy on mental health and educational success and he found that high self-efficacy can have positive effects on students' mental health. Studying the effect of self-efficiency on information literacy of managers, Kurbanoglu et al (2006) concluded that self-efficacy raises the possibility of approaching information literacy skills regarding the level of complexity.

Bandura, Reiz and Adamz (1982) found out that there is a significant relationship between others' verbal persuasion and self-efficacy of individuals. In a research program Skinner and Croft (2009) tried to investigate the planning techniques for improving students' self-efficacy, and the results of their study revealed that there is a meaningful and significant difference between the self-efficacy of the students who have experienced a workshop and those who have not.

Acunnien et al (2009) came to the conclusion that there is a significant relationship between human resources working experiences and their self-efficacy.

Koslowsky et al (2009) in their study showed that there is a significant relationship between presenting successful models, teachers group activities and their self-efficacy.

Hessling et al (2009), in theirresearch on the relationship between teachers' mental health and their self-efficiency, stated that the better the teachers' mental health is, the more their self-efficacy will increase.

Additionally, it is also proved that self-efficacy can mediate the relationship between learning and ethical behavior. In a study conducted by Sukserm and Takahashi (2012), the relationships were investigated of the three variables of learning, self-efficacy and ethical behavior and they highlighted the role of self-efficacy in enhancing the relationship between learning and ethical behavior.

Research Method

This study was conducted with the aim of investigating the factors affecting the self-efficacy of human resources in the educational organizations on the basis of the survey method. The research population consisted of all the administrators of educational units in Karaj, in the school year of 2010–2011, who amounted to 750 participants. The sample included 254 subjects selected according to stratified random sampling on the basis of Morgan's table for determining the sample size. The data collection tool was a questionnaire prepared by the researcher himself and its validity was confirmed by

30 experts, and its reliability was calculated on the basis of Cronbach's Alpha, which was 0/86. The questionnaire contains 42 questions with 5 options which are prepared on the basis of Likert Scale. Questions (1–11) are related to the successful experiences aspect, questions (12–20) are related to the alternative experiences aspect, questions (21–30) are related to verbal and social persuasion and questions (22–42) are related to the emotional and physical states. For describing the data, the descriptive statistics, including frequency, percentage, mean, median, standard deviation and variance were used. In inferential statistics, in order to determine the correlation coefficient between variables, and to evaluate differences between means, Pearson's Correlation Coefficient, independent t test and the analysis of variance were used.

Findings and Results

- The First Hypothesis: There is a significant relationship between successful experiences and self-efficacy of human resources in educational organizations.

Table 1. Results of the correlation matrix of the first hypothesis

	Total	Correlation with successful experience	Significant level	Covariance
Total	253	–	–	–
Correlation with efficacy	–	0.27	0.000	3.11

The data in Table 1 show that the correlation coefficient between the rate of successful experiences and the level of self-efficacy is 0.27. This correlation is positive and at a low level. As the obtained P is lower than 0.05, the correlation is significant. The amount of r^2 or coefficient of determination is 0.07. This means that 0.07 of self-efficacy variance is described by successful experiences.

- The Second Hypothesis: There is a significant relationship between alternative experiences and self-efficacy of human resources in educational organizations.

Table 2. Correlation matrix of the second hypothesis

	Total	Correlation with alternative experiences	Significant level	Covariance
Total	253	–	–	–
Correlation with efficacy	–	0.58	0.000	15.57

The data in Table 2 show that the correlation coefficient between the rate of alternative experiences and the level of self-efficacy is 0.58. This correlation is positive and at an intermediate level. As the obtained P is lower than 0.05, the correlation is significant. The amount of r² or coefficient of determination is 0.33. This means that 0.33 of self-efficacy variance is described by alternative experiences.

- The Third Hypothesis: There is a significant relationship between verbal and social persuasion and self-efficacy of human resources in educational organizations.

Table 3. Correlation matrix of the third hypothesis

	Total	Correlation with verbal or social persuasion	Significant level	Covariance
Total	253	–	–	–
Correlation with efficacy	–	0.61	0.000	17.24

The data in Table 3 shows that the correlation coefficient between the rate of verbal and social persuasion and the level of self-efficacy is 0.61. This correlation is positive. As the obtained P is lower than 0.05, the correlation is significant. The amount of r² or coefficient of determination is 0.37. This means that 0.37 of self-efficacy variance is described by verbal and social persuasions.

- The Fourth Hypothesis: There is a significant relationship between emotional and physical states and self-efficacy of human resources in educational organizations.

Table 4. Correlation matrix of the fourth hypothesis

	Total	Encouraging correlation with verbal or social states	Significant level	Covariance
Total	253	–	–	–
Correlation with efficacy	–	0.76	0.000	32.37

The data in Table 4 shows that the correlation coefficient between the rate of physical and emotional states and the level of self-efficacy is 0.76. This correlation is positive. As the obtained P is lower than 0.05, the correlation is significant. The amount of r² or coefficient of determination is 0.57. This means that 0.57 of self-efficacy variance is described by emotional and physical states.

- First Question: Is there a relationship between the years of service and self-efficacy of human resources in the educational organizations?

Table 5. The results of the variance analysis of Question 1

Source of variation	Sum of squares	Degrees of freedom	Mean square	Significant level	F
Intergroup	12.71	40	0.31	1.30	0.1
Intragroup	51.58	212	0.24		
Total	64.30	253	–		

The data contained in Table 5 shows that because the obtained P (1.30) is higher than the significance level (0.05), there is no significant or meaningful relationship between the years of service and self-efficacy of human resources in the educational organizations. In other words, all the subjects with different years of service agree with the factors that affect self-efficacy of human resources in educational organizations.

- Second Question: Is there a relationship between human resources self-efficacy and their gender?

Table 6. The results of the independent-test of question 2

Groups	Frequency	Mean	Standard Deviation	Degrees of Freedom	The Calculated t	Significance Level
Women	132	61/97	814/0	251	24/0	71/0
Men	121	33/97	842/0			

The data contained in Table 6 reveal that because the obtained P (0.71) is higher than the significance level (0.05), there is no significant or meaningful relationship between the gender and self-efficacy of human resources in the educational organizations. In other words, all the subjects, men and women, agree with the factors that affect self-efficacy of human resources in educational organizations.

- Third Question: Is there a relationship between the human resources self-efficacy and the courses of study?

Table 7. The results of variance analysis for research question 3

Source of variation	Sum of squares	Degrees of freedom	Mean square	Significant level	F
Intergroup	66.71	40	1.66	3.33	0.000
Intragroup	106.18	212	0.5		
Total	172.89	252	–		

The data contained in Table 7 reveals that because the obtained P (3.33) is higher than the significance level (0.05), there is no significant or meaningful relationship between the courses of study and self-efficacy of human resources in the educational organizations. In other words, all the subjects with different majors agree with the factors that affect self-efficacy of human resources in educational organizations.

Discussion and conclusion

The results in the presented study indicate that there is a significant and positive relationship between emotional and physical states, the use of verbal and social persuasion, alternative experiences, successful experiences of human resources in educational organizations and their self-efficacy. However, there is no significant or meaningful relationship between human resources' gender, the years of service, major of studies, and their self-efficacy. The results of the present study echo the results obtained in the following research.

In their study, Bandura, Reiz and Adamz (1982) found out that there is a significant relationship between others' verbal persuasion and self-efficacy of individuals. In this study it is also revealed that verbal persuasion can affect human resources' self-efficacy in educational organizations.

In this study successful and alternative experiences are underlined as effective factors for developing self-efficacy. Acunnien et al. (2009), also in their research, came to the conclusion that there is a significant relationship between human resources' work experience and their self-efficacy. In addition, Koslowsky et al. (2009), in their study, showed that there is a significant relationship between presenting successful models, teachers' group activities and their self-efficacy

Furthermore, Skinner and Croft (2009), in a research program, tried to investigate the planning techniques for improving students' self-efficacy, and the results of their study revealed that there is a meaningful and significant difference between the self-efficacy of those students who have experienced a workshop and those who have not.

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The Ethical Responsibility of Schools:
an Example of Community Service in Turkey

Abstract

Educational organizations, more generally, have been organized on the basis of teaching, sustaining and protecting social values. Young generations could be trained by emphasizing the social values and social responsibilities against the destructive effects of globalization broadcast in the media, such as murder, terrorism, rape, vandalism, etc.

The purpose of this study is to train students to be sensitive to social issues and make them aware of the importance of social responsibility. Under the coordination of the local National Educational Directorate (NED), the steps of the Project were developed with principals. Nearly 2000 students, 110 teachers and 120 classes, participated in the Project in ten different schools in Bilecik, Turkey.

Key words: *educational organizations, social values, social responsibility, social issues.*

Introduction

New generations are generally trained in order to acquire desired behavior that is prevalent in every society. It is shared values of any society that are intended to be upheld from generation to generation. Social and cultural values are kept alive to maintain the assets of society. Together with the emergence of the institutional school system, "upholding the shared values of community" was declared as one of the most significant formal aims of education.

Value has been defined as a widespread belief system, moral principle or cultural tradition that the majority of group members accept to sustain and maintain their

existence and unity, and reflect shared thoughts, feelings, ideas, and objectives. In short, values function as basic standards to determine points of what is desired or not, what is right or wrong. Justice, freedom, patriotism, honesty, honor, dignity, peace, benevolence, diligence are examples of concepts that are strictly connected with values. Values are considered behavior patterns for specific situations where as norms are defined rules of how to act in specific situations and also they are sanctions if desired behavior has not emerged (Bursalıoğlu, 2000, 21; Akyüz, 2001, 37; Kızılçelik ve Erjem, 1992, 99; Lind, 1995, 3; Cüceloğlu, 1997, 547; Balcı, 2005, 37; Şişman, 2002, 3).

The objective of an organization mostly depends on the values in and around. These values, at the same time, give identity to objectives and targets of organizations. Educational organizations, more generally, have been institutionalized on the basis of teaching, sustaining and protecting social values. Culture, history and relations with others are critical parameters for a country to map the objectives of education. Tozlu (1997, 106) reported that energetic, tough, combative and heroic people had been given higher importance than others in ancient Greece and Sparta; whereas China had prioritized the type that was introvert, submissive, full of faith and worshipping ancestors in society. When considering that one of the basic aims of school and education is to train a virtuous person, the importance of values in school life can be better comprehended (Şişman ve Turan, 2004, 104). In Turkey, teachers have viewed the school as a tool for enculturation and domestication; as an outcome of behaviorism in schools. In order to protect and maintain the values that differentiate a society from others and keep it unique, one should be aware of the cultural elements that make up the values; behaviors of the cultural, ethical, moral and transformative leaders have been greatly developed depending on values and emphasizing related concepts such as freedom, equality, and justice. Principals, who are in the school for the purpose of overcoming problems, should do their best to create a positive climate of friendship, sincerity, trust, loyalty, courage, responsibility, initiative, altruism, support, tolerance and problem-solving (Çelik, 2000, 147; Dönmez, 2007; Saban, 2008, 489).

Philosophy of education in modern society and corruption

The philosophy of education in a traditional society targeted to protect and maintain dominant cultural heritage and also transmit it to next generations has transformed in modern society that scientific and research based positivist paradigm aimed to train a new human prototype. The task of transforming and

manipulating society has been attributed to educational organizations and universities (Lui, 2005, 60; Fischer, 2009, 3).

The mission of education in general has been identified to train individuals that are familiar with the dominant paradigm of society. Education has been perceived as dynamics that are able to shape individuals and societies throughout the expectations of superiors in the modern age especially followed by nationalistic movements as an outcome of fabrication. Since education has been attributed a role to transform and manipulate society, corruption and decadence have also emerged in educational settings together with the loss of humanistic values in modern society. Technology, fabrication, high life standard and extraordinary scientific explorations could not lessen trouble of individuals all around the world. Only a small minority of population in the world has had chance to experience wealth and wellbeing of modernity, but the great majority has been forced to live with minimum income, some even suffering hunger, poverty, disease in the 21st century. Education, ironically, has been used to maintain the current status quo, which is favor of the wealthiest in society whether they are developed or not.

The impact of corruption, drug abuse and family disinterest on educational outcomes has started to receive attention only in recent years. It is not a surprise that the education sector is a target for corrupt officials, it is one of the largest budget items in most countries and opportunities for corrupt practices are numerous. In some countries, education consumes an estimated 30 percent of the national budget, creating a potential wide avenue for corruption. Corruption in education is by no means limited to certain countries or regions; in fact, a six-year study of more than 60 countries showed that corruption in the education sector is present in countries ranging from those with poorly governed, low-paid staff to affluent Western democracies. Examples of corruption in the education sector are numerous: ghost schools that do not exist but have expenses that find their way into the pockets of politicians, teachers not showing up for work but collecting salaries, exams being sold to students, and widespread corruption in textbook procurement and school construction that result in books and classrooms costing many times more than they should. In addition, new opportunities for corruption have been introduced with decentralization, privatization, and outsourcing. Corruption also affects the moral fabric of societies, undermines incentives for young people to work hard, and teaches easier means to get ahead. Although corruption in general is a large problem for many countries, corruption in the education sector is even more disturbing, because it undermines the trust and foundation upon which societies are built and takes advantage of those that most need help (Huang, 2008, 1; Barnard and Barlow, 2003, 54).

Discipline problems, lack of respect and morality have been reported as risky situations in modern schools. According to research (MESP, 2004), five main problems listed in order of frequency were: disrespect that makes learners involve in name-calling, swearing, teasing and fighting among themselves; inappropriate physical contact that involves learners in class, both intimate and aggressive contact; racial conflict that makes learners fail to interact freely with one another, but prefer to remain within racial groupings; theft and dishonesty. Teachers mention rudeness, arrogance, vulgarity, talking out of turn, cheeky behavior and a lack of adherence to simple courtesies and manners as problems resulting in disrespectful behavior. But teachers in a knowledge society must be promoters of children's personal growth, ambassadors to multicultural communities and promulgators of democracy (Przybylska, 2011, 93; Pituła, 2011, 100).

Moral and ethical issues have been debated more and more in educational agenda recently (Klimzsa, 2011, 196). Ikemoto (1996) states that moral education has always been at issue in schools in the United States, although the methodology and the content have changed over the past years. Especially after World War II, moral education was largely impacted on by social and cultural change, and it also had a huge influence on society. Lack of discipline has been seen as the biggest problem for local public schools. In 1983, 2951 children and teenagers in the United States died of gunfire. Ten years later, in 1993, 5751 people under the age of 20 died at the hand of a gun, 94 percent of increase. The report also finds that the 5751 youths killed in the US in 1993 were more than three times the total number of gun homicide in Australia, Belgium, Canada, the United Kingdom, France, Germany, Holland, Norway, Spain, Switzerland, and Finland combined. Furthermore, more preschoolers than police officers or US soldiers shot in the line of duty were killed by guns in 1993.

The content of education is the most critical when focusing on the keys of moral education or the value system of society. The stakeholders of school community have composed a set of values usually rooted in societal consensus. The critical issue in evaluating the relativism of a moral education approach is not whether or not it relies on a specific content, rather it hinges on how content is justified. For those educators who try to identify a content list for their moral education programs, there tend to be two major strategies. For example, many school districts will form a representative committee, composed frequently of teachers, administrators, parents, students, clergy, and other stakeholders. They will be charged with generating a list of values and character traits around which the moral education program can center. Sometimes this process can be short-circuited by adopting the results of another community's deliberations, with or without editing. The former

generated the now fairly well-known set of six values that are included in education as trustworthiness, respect, responsibility, fairness, caring and citizenship. The UK committee generated a separate list of values for each of the four domains as society, relationships, the self, the environment. The second approach is to try to identify a universal set of values and character traits. Such a set is assumed to be ethically justified, usually based on philosophical analysis (Berkowitz, 1997).

Schools have been alleged as organized under the effect of modern educational ideals which have increased inequality among students and parents, targeted to train workforce for capitalist economy, ignoring the humanistic values, furthermore having lost legitimacy in society. Schools have been transformed into organizations that are uninteresting, value free and permanently distributing certificates within the walls; consequently, hopelessness, aimlessness, powerlessness and poverty are the most basic reasons for school failure. As a response to these trouble, Turan emphasized (2007, 24; 2008, 26) transformational leadership that continuously reproduces new values, is capable of designing the search of updated vision and affects the process of generating excellent schools, together with underlying the necessity of school culture and climate that depends on mutual understanding and trust. Bribery, corruption, increased drug use habits have caused an increase in social disruption such as divorce, prostitution, violence and loss of trust, which has resulted in a risk society. Schools, turned into less appreciated and risky organizations, have been designed as organizations mostly depending on academic information much more than the ideals of training good man and virtuous citizens (Çelik, 2007, 40; Töremen, 2006, 28). Concerns about security and distrust for educational institutions have caused people to search for alternative schools, such as home schooling that nearly more than two million students preferred in the west and Catholic schools, having the lowest crime rates, and have been preferred as a result of the new search for educational opportunity (Aydın, 2006, 48; Şişman, 2007, 20).

Studies conducted on students inclined to crime showed that most of their parents are indifferent to schools and have lower socio-economic status, and this outcome raises the importance of social policies and crisis management. It is essential to focus on parents' effect on students' achievement that was revealed in Coleman's report, according to which school funding has little effect on student achievement; student background and socioeconomic status are much more important in determining educational outcomes than differences in school resources. The outcomes of the report have been verified on the point that schools no longer have an effect on students both socially and economically and education given in schools is incapable of providing better life standards. According to the study by Yıldız (2004, 288), conducted to analyze the relationship between educational level

and types of crime, people who are illiterate, literate but not graduates of primary schools and graduates of primary schools have much more tendency to crime such as theft, drug abuse, rape, extortion, trafficking, molestation and mutilation, whereas there is a relationship between the high school education and type of fraud.

Öğülmüş (2006, 16) emphasized that schools and environments have to be places where students can feel secure in order to prepare themselves for the world of adults, nevertheless statistics have proved the opposite. In the 1940s, the most significant discipline problems were reported as talking without permission, gum chewing, noise, running in the corridors, getting in line or not, or inappropriate clothing. Whereas in the 1990s more complex, organized and destructive criminal events were reported, such as bringing weapons to school, gangs, alcohol and drug addiction, school dropouts, environmental damage, aggression and adolescent pregnancy.

The causes of negative and destructive behaviors in schools, such as violence, frustration, aggression, could stem not only from environmental incitement but activities and hidden curriculum could also play an important role. It was stated by Bacanlı (2007) that whereas students are trained to be obedient to elders, they could be frustrated because of the hidden curriculum in Turkey. Hidden curriculum means messages conveyed informally by teachers and other stakeholders in school, which are action-based not theoretical. Students that were frustrated, suppressed, and disrespected will possibly try to act as they are treated whatever the advice is at school. Whether it is hidden or not, every country tries its best to give certain messages to citizens and place values throughout the curriculum. Any state aims to convey some value-based messages to its people in order to create a wealthier and prosperous society.

Doing good things in schools: "a piggy bank to every class"

The educational program in Turkey that had been sustained since 1968 and was partially renewed, was totally reformed in 2004 and put in force in schools. The former Head of the Educational Council, Prof. Dr. Ziya Selçuk, declared that the new program will be widespread and comprehensive enough to appeal to a variety of regions of Turkey and will contribute to national values harmoniously, which should give way to enlivening all the living cultures in society and bridge the gap between local, national and universal values harmoniously so as for them to live longer (Karaçalı, 2004).

Research

It is aimed to train students to be sensitive to environmental and social issues, to foster creative thinking throughout the reformed curriculum in 2004. The main objectives of the program is to contribute to the understanding of students' social issues and values under the heading and subject of "Community Service" listed in the Amendment of Social Activities, article 12 of the Ministry of National Education (MoNE) in Turkey that are listed below (MEB, 2005, article 12). According to the newly reformed curriculum students are trained in order to:

- Organize activities to contribute to school or other poor schoolmates such things as books, tools and educational materials,
- Help students of lower grades with their lessons, projects and homework whenever they need it,
- Protect, beautify and enrich the environment, develop projects to enliven cultural and historical heritage, fight erosion, try to grow the plants that are about to extinct.
- Inform people and students in order to obey social rules,
- Help the poor, homeless, handicapped, orphans and old with their daily routines if they need help in society,
- Try to socialize children and the elderly who are living in nursery institutions to facilitate their life,
- Try to take part in and contribute to the service of non-government organizations.

The purpose of this study is to train students to be sensitive to social issues and teach them to hold social responsibility qualitatively. In the first step of the Project, each class was asked to develop a project on community service in cooperation with their teacher. Then, they were given pottery piggy banks as presents, which were produced and shaped in the same local town traditionally and approximately cost one Euro, the students were informed that they would have to voluntarily contribute to the pottery piggy banks no matter what the amount would be. After three months, they would break their piggy banks in front of their class and move to perform their community service project which had been decided on by them before.

Process

In coordination with the local National Educational Directorate (NED), the steps of the Project were developed with principals. It was emphasized that the Project would

be voluntary; the teachers would guide and underline the purpose and significance of the Project in class periodically. Each school would determine the topic of community service collaboratively, unique to their school, they would voluntarily contribute to pottery piggy banks that were given them as presents by the NED, aware of the objective of the contribution, and at the end of the three months' period, each school would try to spend the money that they had saved completely on the Project. Nearly 2000 students, 110 teachers and 120 classes, participated in the Project in ten different schools in the district. At the end of the project, the piggy banks were broken by the teachers and the students, which was the most enjoyable and interesting point of the projects. The projects were intended to enhance the students' awareness of social issues.

The schools could either accept one of the topics listed below as a community service or they could decide on another subject connected with the spirit of social responsibility. There were ten schools participating and the following are the topics they decided to implement as a community service in the schools.

	School	Subject of the Social Responsibility Project
1.	Multifunctional High School	Meet needs of people living in village
2.	Anatolian High School	Support orphan students living in boarding school
3.	Vocational High School	Donate funds for children with leukemia
4.	Vocational Health School	Meet needs of students living in village
5.	Ataturk Primary School	Meet needs of people living in village
6.	Beşeylül Primary School	Meet needs of students living in village
7.	Public Primary Boarding School	Help people staying at Nursery Home.
8.	Demirköy Primary School	Donate to children in Children Protection Center
9.	Kınık Primary School	Buy some toys for children living in village
10.	Karaköy Primary School	Buy educational equipment for poor students

The key of the project conducted for three months in Pazaryeri, the district of Bilecik province in Turkey, was to perform the process of community service that was targeted in the new curriculum at the level of school and region, and provide voluntary contribution to the students regardless of their socio-economic status for social responsibility.

Discussion and Conclusion

Schools experienced some weaknesses during the piggy bank project on the point that some principals and teachers could not believe in the objective of the

Project enough to sustain it effectively, the pottery piggy banks could possibly be broken down or lost in the process of the project and the students in the upper classes could not take it seriously. Some pottery piggy banks in the classes were broken down, but the teachers provided new ones on their own, and some were lost in some classes. When some pottery piggy banks were lost, it was aimed to emphasize the negative and destructive end of the theft as part of the value education. When it was revealed that the small amount of money saved was insufficient to achieve the goal of the project, the students thought that they should have donated more. The sense of acting together to achieve a goal throughout the Project was the main outcome of this activity. The principals and teachers who were unable to internalize the objective of the Project and considered it a childish act to cost them supplementary work could only be convinced with the help of effective leadership. Educational leaders should focus on the objective of the Project, underline the importance of the social responsibility and community service homework and not allow false assumptions and malicious intentions to demoralize and demotivate effective participation of students, teachers and principals.

Consequently, it was aimed to reanimate the tradition of "doing good," which is nearly forgotten, via the Project whose aim was to make the students sensitive to their environment and have the sense of responsibility towards social issues. Although the objectives of the community service project that were defined by schools could successfully be achieved either by official or non-government organizations more detailed within society, the participation of the students in such activities was the key of the projects and of great value, no matter how small the amount of the contribution was. Such a kind of projects teaching students to have social responsibility and solidarity, and training them to be sensitive to social issues could contribute to protecting the values that are about to be destroyed in the process of modernization. Young generations could only be trained by emphasizing the social values and social responsibilities against the destructive effects of murder, terrorism, rape, vandalism broadcast in the media. The principals and teachers played the central role in the process of achieving the goal in a transparent manner (Özgan, 2011, 117). When they acted as leaders in the school, all the students and teachers came together to perform the project tasks, however some of them, presenting poor leadership performance to organize and motivate the teachers and students, listed excuses as causes of their poor performance. Leadership makes a difference when doing something in organizations; some principals did their best to lead their schools throughout the Project irrespectively of the hindrance they faced, whereas some disguised their poor performance under simple excuses.

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Technology
of Education

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Incorporation of Experimental Methods into Teaching Real Estate Economics:
Process, Practice and Development

Abstract

Inspired by the prominent effects that experimental methods have achieved in economics, management, and other fields, this paper tries to introduce the experimental methods into the teaching of real estate economics. For investigating the feasibility and the effectiveness of experimental teaching in a real estate course, we designed and conducted an experiment about the real estate bubble. The effectiveness of the experiment was assessed by questionnaires in four aspects: theoretical understanding, perceptual knowledge, study enthusiasm and practical skills. The results indicate that the experimental methods can be used as an effective teaching method for a real estate economics course.

Key words: *experimental teaching, real estate economics, real estate bubble, case.*

1. Introduction

With the continuous improvement and perfection of experimental economics methods, experimental methods have been widely used in economics, management, finance and other curriculum teaching. Experimental teaching utilizes experiments to simulating real economic processes and behavior of economic subjects to examine economic theories and hypotheses. The effects of experimental teaching have been debated in the past few years, both in economics and more widely (Holt, 1999; Bergstrom and Miller, 2000; Pickett and Oliver, 2000; Romero and Museros,

2002; Holt, 2003; Emerson and Taylor, 2004; Yandell, 2004; Flora and Cooper, 2005; Dickie, 2006; McKinnon and Schulman, 2007). Participating in an experiment, students can obtain intuitive and profound experience, understand boring theories, and develop their thinking, creativity and practical abilities. Experimental teaching is an accepted method of teaching economics. Some texts are very popular at colleges and universities (O'Sullivan and Sheffrin, 2006; Holt, 2007).

The prominent effects that experimental teaching achieved in economics, management, finance and other fields have promoted the idea of incorporating experiments into the teaching of a real estate economics course. Real estate economics is theorization and systematization of the operation process of real estate economy aiming at reviewing and reflecting real estate economic rules, and it is a branch science discipline of practical economics.

Due to the particularity of real estate commodities and the complexity of the real estate development and transaction process, the vast majority of students do not have the experience of developing and trading real estate commodities, which makes students feel confused when learning real estate economic theories. By incorporating experiments into a real estate economics course, the students who have not participated in real estate practices can also experience the economic process in experiments. Thus, this teaching approach may also suit for real estate economics courses. For exploring the feasibilities of experimental teaching and introducing the experimental methods into the teaching of real estate economics, we designed and conducted an experiment about the real estate bubble to investigate the effectiveness of experimental teaching.

2. Experimental teaching of real estate economics

2.1 General

Currently, university and colleges rarely introduce experiments in real estate economics courses. Only a few scholars adopt the experimental method in the research on real estate economics. As far as experimental real estate economics is concerned, only a fraction of published or working papers on experimental real estate economics can be found (Ong et al., 2003; Nuriddin and Yavas, 2012a; Nuriddin and Yavas, 2012b; Seiler, et al., 2012).

2.2 Selection of experimental contents

Only partial course contents of real estate economics are suitable for teaching by experiments. Selection of experimental contents ought to abide by the fol-

lowing principles. First, some real estate economics theories have highly abstract hypothesis which cannot be satisfied in experiments, so it is difficult to teach them by the experiments. Second, some real estate economics theories are easy to understand, theory explanation is sufficient and experiments are unnecessary. Third, experiment duration corresponding to some contents is too long, while experiment implementing time, in our opinion, shall be controlled within two hours, because it is hard to finish an experiment requiring a long time in the course.

2.3 Design of experiments

Experimental design can be carried out after the experiment content is chosen, mainly including a few steps. The first step is determining the main experimental problems according to teaching contents. The second step is carrying out the structural design of experimental market, including the main composition, market environment, and trading objects at the experimental market. The third step is the design of the market trading mechanism, including determination of the trading process, trading rule, and payment rule of the trading object, etc. for the experimental market. The fourth step is designing an incentive experimental mechanism, including determining material incentive mechanism, such as the basic salary, experimental award, etc. of the experimental participants and non-material incentive mechanisms, such as credit points, academic record, and public praise.

Experimental design should follow the principle of simplicity, repetition and controllability. The principle of simplicity means that the experimental design should not be too complicated. The real estate economic process is very intricate, and it is impossible to embody each of the details during an experiment. Therefore, key problems in the real economics process should be reflected through simple experiments according to research aim. The principle of repetition means that experiments can be repeated with stable results and without severe deviation, so as to ensure that teaching experiments designed can be used repeatedly. The principle of controllability means controlling the experimental design, constructing different experimental environments and observing the behavior of the experiment participants in different experimental environments.

2.4 Implementation of experiments

Before conducting an experiment, the following preparations should be made according to the experimental design: programming with the use of experimental software, debugging hardware and preparing experimental instructions, experimental testing and questionnaires. In addition, it is also necessary to determine a display method of experiment results in advance and prepare blank charts so

as to timely prepare charts displaying experimental results after conducting the experiment. Conducting of experiments in real estate economics mainly includes the following steps:

The first step is explaining theories before the experiment. Before carrying out the experiment, explain relevant theories involved in the experiment, ask students questions about the experiment, and remind them of thinking during the experiment.

The second step is carrying out the experiment. It generally includes: grouping students, reading the experiment instruction, dealing with students' questions, testing before the experiment, implementation of a training experiment, implementation of a formal experiment, collection of experimental results, questionnaire survey after the experiment and interview, etc. Conducting an experiment is controlled by teachers, and experiment assistants can be arranged when necessary.

The third step is displaying experiment results. After the experiment, the experiment assistants should output experimental results from experiment software immediately and prepare relevant charts to display the results to students in a most direct form, and teachers should briefly explain the charts.

The fourth step is discussion after the experiment. After displaying the experiment results, teachers should review questions asked before the experiment for students to conduct discussion and guide and control the discussing process so that the discussion can be conducted in a more orderly and effective manner. At the end of the experiment course, the teacher should summarize the course and record the experiment achievements and discussion performance of the students after the experiment so as to evaluate the experiment course achievements of the students.

3. Case: Experimental teaching of real estate bubble

3.1 Design of experiments

(1) Determine experiment problems

After analyzing and summarizing the real estate bubble theory involved in the experiment, two experiment problems are determined. First, what are the reasons for causing real estate bubble? Second, how is real estate bubble generated? Therefore, the purpose of the experiment is to enable students to participate in real estate speculation in the laboratory and personally experience the formation process of real estate bubble and analyze its causes.

(2) Experimental market structure design

At the beginning of each session, all traders were given eight million units of experiment currency and a house which can be used for 24 periods. There was no residual value for recycling when the house expired. All the participants in the experiment were traders who could buy and sell houses at that market. Their aim was to earn as much money as possible from transactions. There were 24 trading periods in each session. One period lasted 100 seconds. At the end of each period, subjects who possessed the houses could earn the rent of that period.

(3) Market Institution

The double auction which could well reflect the characteristics of transactions in the Chinese resale housing market was applied as the experimental market institution. Traders freely accepted and submitted offers at the market. One's offer price would become the transaction price when it was accepted by other traders. All of the offering, charging and transaction prices were open to the public.

(4) Incentive mechanism

The incentive mechanism included three parts: basic salaries, rewards, and gifts. Basic salaries for each subject were 20 CNY. Rewards and gifts were determined by traders' experiment performance. The rewards consisted of two parts: transaction earns and rents. At the end of our experiment, traders could exchange experiment currencies into CNY, at the rate of 500,000 to 1. Gifts, worth 20 CNY, were given to six traders who had made the most accurate forecast.

3.2 Implementation of experiments

(1) Theory explanation before experiment

Twelve postgraduate students enrolled in the real estate economics course were recruited for the experiment. All of them had not participated in a similar experiment before. Before the experiments, the teacher should explain the definition of the real estate bubble and relevant knowledge, with main contents including: the real estate bubble means the real estate price higher than the theoretical price due to its continuous increase. There are many reasons for explaining the real estate bubble, e.g., expectation of price growth, speculative activities and "irrational" behavior, etc. Common expectation of real estate price growth is the basis for forming the real estate bubble. When people expect that prices will increase and more benefits will be obtained through speculative activities, they will increase their purchase,

which results in increasing the demand of real estate goods. However, real estate supply is short term and rigid, increasing demand will result in continuous increase in real estate price, which further strengthens people's expectation of increasing price. Real estate price increases continuously during the positive feedback process strengthened continuously, resulting in forming an increase in real estate bubbles. In addition, "irrational" behaviors, such as blind panic purchase and dumping, further accelerate the forming of real estate bubbles.

(2) Conducting the experiment

The experiment was programmed and conducted with the use of experiment software Z-Tree (Zurich Toolbox for Ready-made Economic Experiments). It was developed at the University of Zurich. It was specially designed to enable the conducting of experiments without prior experience. The software is stable and allows for programming almost any kind of experiments in a short time. (Fischbacher, 2007) The experimental interface of this experiment is shown in Figure 1.

Figure 1. Experimental interface
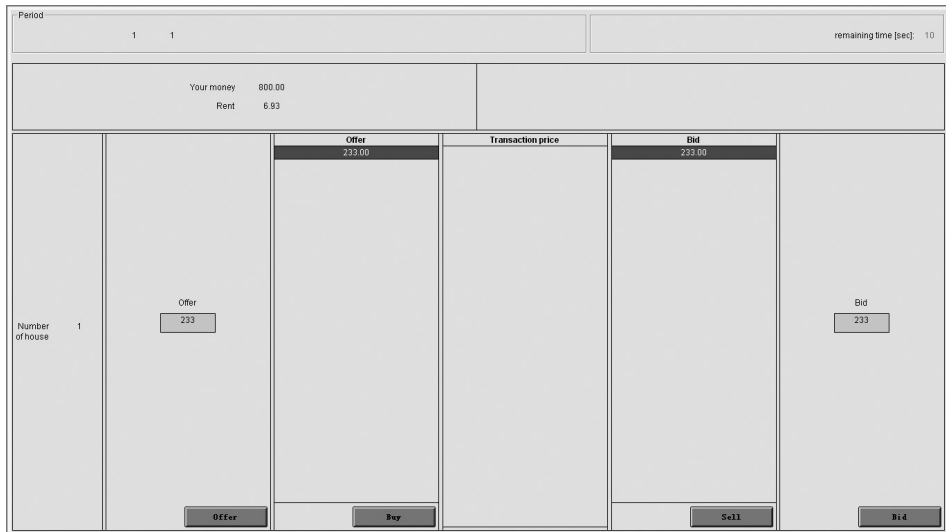
Before the training session, there was a lot of preparation. The first stage was reading the experiment instructions after the students had browsed them. The second was answering the traders' questions. The third was showing each participant how to use the software. And the fourth was asking the traders to finish the experiment

understanding test. After all the traders were able to completely understand the experiment instructions, the training session started. First, the teacher issued the rent of the first period, and then all the traders were asked to forecast the average transaction prices of each kind of resale houses in that period and to fill in the forecast table. After the first period training session, the computer screen was switched to the conclusion interface. Then the traders were asked to forecast the rent and the average transaction prices of the second period and to fill in the forecast table again. At the beginning of the second period, the teacher released the rent of that period. According to this order, the training session was terminated in the seventh period. There were three formal sessions. The process of three formal sessions was the same as the training session. At the end of our experiment, a questionnaire was answered by the traders. And the experimental assistant calculated and paid the rewards for each subject. Gifts were given to the traders with the most accurate forecast performance. Some traders were interviewed after the experiment.

(3) Presentation of experiment results

After finishing the experiment, the experiment assistant timely derived experiment data and drew relevant charts from the experiment software and forecast table filled by the students, then the teacher made a demonstration and a brief introduction of those charts.

First, according to the concept of real estate bubble, the bubble computing method was set as follows:

$$B = \sum_{t=1}^{24}(P_t - P_t^*)$$ (1)

In it, Pt refers to the average price of housing in t market trading period, Pt^* means a theoretical price of housing in t market trading period, which are cumulatively determined by the remaining lifetime rent of housing.

After calculation, the size of real estate market bubble was 2.404 million units of the experiment currency, and the average trading price was about 100,000 units of the experiment currency higher than the theoretical price per period. The contrast of transaction price and the theoretical price is shown in Figure 2.

In order to help the students to have a better understanding of the formation process of transaction price, the experiment assistant had also mapped out a comparison chart of the four prices like forecasting price, offering and charging, transaction price and theoretical price of housing, which is shown in Figure 3.

In addition, in order to reflect the students' expected situation for market rent in the transaction process, the forecast map of housing rent is shown in Figure 4.

Figure 2. Comparison chart of transaction price and theoretical price
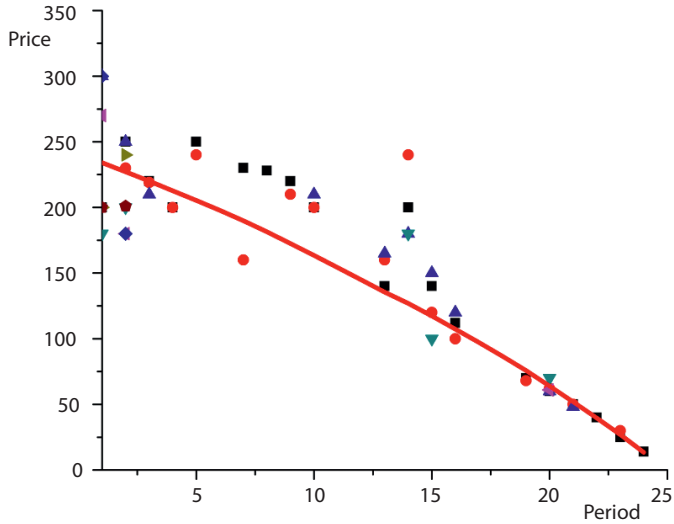
Note: 1. Scattered points in the chart represent actual transaction price;
2. Red line represents theoretical price of housing.

Figure 3. Comparison chart of the four prices
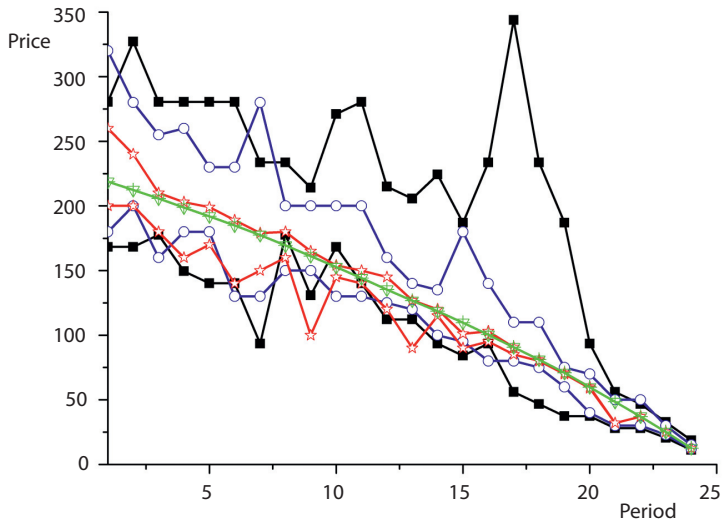
Note: 1. Green line represents theoretical price of housing; 2. Two red lines represent the upper and lower limits of housing transaction price; 3. Two black lines represent upper and lower limits of housing offering; 4. Two blue lines represent the upper and lower limits of housing forecasting price.

Figure 4. Chart of rent forecast
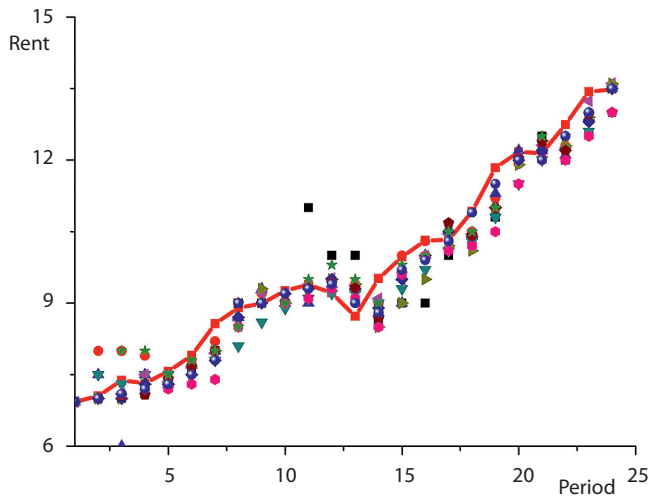
Notes: 1. Scattered points represent students' predicted rental value;
2. Red line represents the actual value of the rent.

(4) Discussion after experiment

First, teachers shall guide two types of discussion corresponding to experimental problems: the firs type is problems regarding reasons for forming real estate bubbles, mainly including: 1) The results show that the housing trading price is higher than the theoretical price on the whole, forming some real estate bubbles, for what reasons do you think the real estate bubbles are caused? 2) With stable rise of rent, do you think that people have consistent expectations of a relative increase in housing price? 3) During the process, do people show some "irrational" behaviors? If any, what are they? 4) Bubbles are formed even in a simple experiment environment without asymmetry between trading cost and information, then in real conditions, will more severe bubbles be formed and why?

The other type is problems regarding the formation process of real estate bubbles, mainly including: 1) In what process are real estate bubbles formed? 2) What relationship is there among the estimated price, offering price, trading price and theoretical price of housings?

During discussion, teachers shall guide and control the discussion process properly. At the end of the experiment course, teachers should summarize the experiment course and encourage students to think deeply about the real estate bubble theory.

3.3 Assessment of experimental teaching

In order to get to know the effect of the experimental teaching a questionnaire survey was carried out among the students participating in the experiment, the results of which are summarized below.

Question: Do you agree with the following description:

1) I have a deeper understanding of the concept, forming process and reasons for the real estate bubble than ever before after participating in the experiment.
2) I have a more perceptual knowledge of the real estate bubble phenomenon and the forming processes after participating in the experiment.
3) I am more interested in the experiment compared to traditional multi-media teaching.
4) Experimental teaching is better to exercise the comprehensive ability in practical skills.

The respondents answered these questions on a Likert-type scale ranging from 1 ("strongly disagree") to 5 ("strongly agree") in increments of 1, with 3 being "uncertain."

Table 1. Questionnaire results

Subjects	Question 1	Question 2	Question 3	Question 4
1	4	5	5	4
2	3	5	5	4
3	4	4	4	4
4	3	5	5	5
5	5	5	5	5
6	4	4	4	5
7	4	5	5	4
8	4	4	5	3
9	4	4	4	4
10	5	5	5	4
11	5	5	5	5
12	3	3	4	4
Average	4.00	4.50	4.67	4.25

It can be seen from the findings of the survey, presented in Table 1, that: 1) the participants have an in-depth understanding of theoretical knowledge. Among twelve subjects, three of them selected "3" (uncertain), six subjects selected "4"

(agree) and three selected "5"(strongly agree) with an average of 4.00, which showed that the subjects had a deeper understanding of the concept, formation process and causes of the real estate bubble than ever before through the experimental course; 2) the subjects' perceptual knowledge of the real estate bubble phenomenon and the forming processes had been strengthened with an average of 4.50; 3) the subjects had a very strong interest in experimental teaching and all the subjects were very fond of this teaching manner with an average of 4.67. Even without bonuses and gifts, they were willing to participate in similar experimental programs again; 4) the subjects' comprehensive ability to apply knowledge had been exercised with an average of 4.25. In the interview, many subjects said that they would consider the relationship between housing prices and rent, housing depreciation, income from investment, offering technique, market forecasting and other aspects in decision, thus they were able to make rational decision-making in the experiment only after they had mastered and comprehensively used these aspects of knowledge. Their comprehensive ability in practical skills would be improved.

4. Conclusions

The experimental approach is designed and applied to the teaching of real estate economics. In order to explore the effectiveness of experimental teaching, we designed and conducted an experiment about the real estate bubble. The effectiveness of the experiment was assessed by questionnaires in four aspects: theoretical understanding, perceptual knowledge, study enthusiasm and practical skills. In conclusion, experimental teaching is of great importance to improve teaching quality and teaching effect, including the following aspects.

First, experimental teaching is beneficial for students to deepen their understanding of real estate economics theories. Experimental teaching has combined theory and experiment well to examine economic theories with experimental methods, which can help students have a deeper understanding of abstract theories.

Second, experimental teaching has made knowledge more dynamic, concrete and procedural, bringing students with more intuitive feeling, and enhancing students' perceptual knowledge about economic phenomena and processes.

Third, experimental teaching can motivate students' learning interest and enthusiasm. In an experiment, students are in real market situations and are given different roles in the real estate market, participate in real estate economic activities in which they have hardly been involved in real life, and this is very attractive to students.

Fourth, experimental teaching can improve students' comprehensive ability of using knowledge. An experiment is of high comprehensiveness. It often involves much theoretical knowledge, so it can make students sense the relationship between several theoretical knowledge points. As a result, their comprehensive ability in practical skills is effectively exercised and improved.

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Mobile Learning with Twitter to Improve Linguistic Competence at Secondary Schools

Abstract

This article presents research conducted in three secondary schools in the region of Castilla-La Mancha (Spain), where an interdisciplinary program was developed to improve linguistic competence through the use of Twitter as a communication tool. After testing the validity of Twitter as a technological curriculum innovation process, we can conclude that it promotes a substantial improvement of the teaching-learning process, specifically in the development of reading and writing skills. Twitter application on mobile digital devices, such as smartphones, tablets, or mini laptops becomes a digital resource with numerous possibilities in education.

Key words: *networking, key competencies, mLearning, uLearning, collaborative work, digital literacy.*

Introduction

This paper describes how the social networking service Twitter (http://twitter.com) was applied in three secondary schools in Toledo (Spain) for 5 months in the academic year 2010/11 to test possible developments and improvements in students' linguistic competence. Twitter was used by 15 teachers and 280 students in three subjects: the Spanish language, social sciences, and natural sciences, in the third course of compulsory secondary education. Twitter is a popular "microblogging" service that is used by millions of people around the world. It allows the user to post a short item online. Each post is known as a "tweet" and is limited to 140

characters. Twitter can be accessed in different platforms from mobile devices, such as smartphones, personal computers, tablets, etc.; what this implies is that users can receive and produce information anytime and anywhere. In addition, in many schools, ICT is used not only for limited communicating everyday information but also for strengthening family engagement and encouraging learning outside and inside the classroom. To our knowledge, this is the first analysis of the use of Twitter to assess its influence in the development of writing and reading skills in Spain. Twitter was selected because it provides students with an opportunity to practice the mother tongue as well as their communicative, cultural, and digital competencies.

The advantages of using an online social networking and microblogging service like Twitter in smartphones, tablets, or mini laptops for education are that it is instantaneous, cheap, and universal. The majority of EU households have access to a telephone (98%), and more people have access to a mobile phone (89%) than to a landline (71%) (Special Eurobarometer 362-European commission, 2011). Twitter, and social media in general, can be a surprisingly useful educational activity for the development of key competencies as well as an instrument of school interaction, fostering the relationships of students and teachers. The member states of the European Union have agreed on the promotion of creativity and innovation through the use of new technological resources and teacher training as a priority area for the first cycle of the strategic framework for education and training (ET, 2020). There will be no separation between real and digital life: staying in online contact with friends and colleagues, working virtually on international projects, writing an online text, or getting recommendations for interesting locations nearby. Digital communication enriches the real world.

mLearning, uLearning, and key competencies

There is an increasing amount of mobile learning research focusing on feasibility combined with data on user experience (Fisher & Baird, 2007; Triantafillou, Georgiadou & Economides, 2008). These studies outline the type of infrastructure used to support mobile learning (mLearning) and the issues encountered when testing systems, and report positive user experiences of the use of mobile technology for learning and workload management. The existence of nearly 2.7 billion active mobile phones worldwide dramatically illustrates the huge potential for the mLearning market and education (Delfino, Dettori & Lupi, 2009; Vázquez, 2011). Using mobile technology for teaching and learning is a rapidly evolving area of

educational research (Collins, 1996; Frohberg, Göth & Schwabe, 2009; Vavoula, Pachler & Kukulska-Hulme, 2009; Dyson, Litchfield, Lawrence, Raban & Leijdekkers, 2009).

The development of modern mobile communication equipment introduces new learning media and resources that, when combined with earlier theories and paradigms, accelerate the change in learning concepts that provide new modes of interactive learning. Although the benefits of using this type of learning have been highlighted by numerous authors, it is increasingly difficult to locate mLearning within the constraints of formal education. Thus, we can speak of mLearning for content distribution (Muyinda, Lubega & Lynch, 2010), as a facilitator of reflective processes (Corlett, Sharples, Bull & Chan, 2005) and as a basis for developing and deploying mobile games based on learning (Mitchell, Millwood & Fallenboeck, 2006). Authors such as Cochrane and Bateman (2010), and Dyson et al. (2009) emphasize that the benefits of mobile learning derive from the portability, flexibility, and context of mobile technologies, which allow learning, promote collaboration, and encourage independent learning for life. These digital resources allow students to communicate among themselves and with faculty and create virtual communities of constant access.

In this technological context, key competencies appear as the fundamental reference for educational success. By transforming teaching and learning, Information and Communication Technology (ICT) is considered to contribute to the acquisition of many key competencies. Students need to achieve an effective digital competence for their future in the academic, personal, and professional fields (European Comision/Cluster TIC, 2010). Thus, the use of ICT has to be compulsory in the teaching and learning process and has to be integrated into the curricula for almost every subject. It is not sufficient to teach the handling of digital devices; learners have to find out how to learn with the help of ICT (Bosch, 2009; Vladar & Fife, 2010). Communication in the mother tongue requires an individual to have the knowledge of vocabulary, functional grammar, and the functions of language, among other important items. It includes an awareness of the main types of verbal interaction, a range of literary and nonliterary texts, the main features of different styles and registers of language, and the variability of language and communication in different contexts. Individuals should have the skills to communicate both orally and in writing in a variety of communicative situations and to monitor and adapt their own communication to the requirements of the situation. It is essential for students to perceive the applicability of linguistic competence not only in normal and regular contexts but also in a virtualized world so as to develop it in a more practical and functional way. Hence, the use of Twitter

as a social networking service based on writing and reading messages could be a very productive resource in the improvement of this competence.

Method

The purpose of this multi-case study was to assess the appreciation of teachers and students about the functionality of Twitter in developing linguistic competence in secondary education and to compare the students´ results on linguistic competence before and after the application of Twitter from a didactic approach in three high schools in Spain. Stake (2006) pointed out that multi-case studies are "studies of particularization more than generalization" and emphasized the need for commonality of individual cases that can be categorically bound together. Stake referred to the group, category, or phenomenon as a "quintain." The commonality of this particular quintain was schools that were recognized for their leadership positions in Toledo (Spain) in both educational results and community programs, and in which the Supervisory Services had proposed to develop an experimental program on ICT with Twitter. This multi-case study (Bogdan & Biklen, 1982; Merriam, 1998) included data collected from interviews, school exams, and national exams to assess key competencies and classroom activities. Our research process involved the following phases:

1. Validation of the questionnaire and data collection instruments.
2. Data collection through the education inspector's visits.
3. Comparison of results from the different educational areas and questionnaires and exclusion of unreliable results.

Data Collection and Analysis

Table 1. outlines the characteristics of the data.

Table 1. School-Community Data

	Private with concert	Public	Private Schools	High-Schools Total
City	0	1	1	2
Rural	1	0	0	1
Number of Students	80	120	40	280

Our key informants and techniques employed are presented in Table 2.

Table 2. Key informants and techniques

	*Teach*ers		Students	
	Male	Female	Male	Female
Questionnaires	7	8	135	145
Open Questions	7	8	41	37
Semi-structured individual interviews	7	8	23	19

To develop the program with Twitter, the subjects Spanish language, social sciences, and natural sciences were selected at each secondary school in the third course of compulsory secondary education, with the students between 13 and 15 years of age. These subjects were chosen because they share common contents, making it easier to establish shared projects to develop key competencies. All the students selected had a mini laptop, tablet, or smartphone with Internet connection and the Twitter application installed.

Procedure

The data were collected over 5 months from individual participant interviews, questionnaires, study groups, meeting notes, participant reflections, and the researcher's field notes and reflections. Carefully constructed interview questions about Twitter activities to develop linguistic competence and to assess the appreciation of the participants in the program were developed. All the interviews were prescheduled, tape-recorded, and transcribed for accuracy. The data from various monitoring techniques were triangulated to increase the validity of the study results refinement of the inherent shortcomings of a single method of data collection and control of the supervisor's personal bias.

Results

The quantitative results obtained were analyzed using the SPSS 16.0 statistical package. We used descriptive analysis and contingency tables with the frequencies and percentages of the variables analyzed. Through questionnaires and interviews, we reviewed the assessment, appreciation, and expectations of the teachers and students about the use of Twitter for the development of indicators of linguistic competence. The five variables that were mentioned by the most representative interviewees in the teaching-learning process (students and teachers) are shown in Tables 2–3. We analyzed the teachers' expectations about the ICT-Twitter project

and its impact on the teaching practice. Then we divided the results into five sub-variables.

Table 3. Descriptive statistics of teachers' expectations

Items	Range	Min.	Max.	Mean	Tp. Dev	Vari-ance
a) Promotes interactivity and dynamism.	4	1	5	3.15	.889	.745
b) Fosters collaborative and supportive work.	4	1	5	3.43	1.02	.872
c) Promotes self-learning and self-discovery.	4	1	5	3.48	.912	.891
d) Develops critical attitudes.	4	1	5	3.19	.998	1.123
e) Promotes the practical application of ICT.	4	1	5	3.59	.865	0.875

N = 15 Cronbach's α= 0:81

**Table 4.** Descriptive statistics of students´ expectations

Items	Range	Min.	Max.	Mean	Tp. Dev	Vari-ance
a) Promotes interactivity and dynamism.	4	1	5	3.18	.789	.645
b) Fosters collaborative and supportive work.	4	1	5	3.53	1.01	.982
c) Promotes self-learning and self-discovery.	4	1	5	3.16	.812	.798
d) Develops critical attitudes.	4	1	5	3.39	1.10	1.212
e) Promotes the practical application of ICT.	4	1	5	3.40	.765	0.671

N = 280 Cronbach's α= 0:80

Noting the average, we can say that the five sub-variables have a similar assessment for the students and teachers. For the teachers, Twitter activities promote the practical application of new technologies (n=3.59–89.75%), promote self-learning and self-discovery (n=3.48–87%), and foster collaborative and supportive work (n=3.43–85.75%). For the students, fostering collaborative and supportive work (n=3.53–88.25%), promoting the practical application of new technologies (n=3.40–85%), and developing critical attitudes (n=3.39–84.75%) were the most valued items. The average rating among the teachers and students can be observed in the following chart:

A pretest and posttest quasi-experimental design was used to assess the results on the indicators of linguistic competence among different groups in the three high schools. The pretest was undertaken after the first evaluation of the year (December). The posttest was undertaken after the second evaluation (April); Twitter activities were developed in the same academic year. The statistical results are shown in relation to the exprimental group (Dimension 1) and the control

Figure 1. Areas for improvement with the use of Twitter.
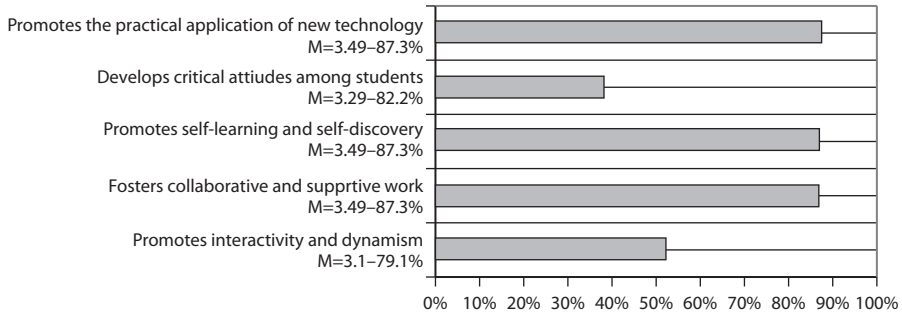
group (Dimension 2). Percentages are compared according to the indicators of linguistic competence in national assesment tests for measuring the development of key competencies in Spain. Both dimmensions are rated up to 1 (median: 0.5). The pretest-postest contrast is treated as a within-subjects factor and the groups as a between-subjects factor. Since the within-subjects factor has only one degree of freedom, the multivariate approach results will be identical to the univariate approach results, and sphericity will not be an issue.

Table 5. Comparison: Results of Indicators in Reading Skills (Post-Test results)

Comparison: Results of Indicators in Reading Skills	Control (N=281) No ICT Program			Experimental (N=280) Twitter activities			Sig.
Indicators	Mean	St. Dev.	Error St.	Mean	St. Dev.	Error St.	p
1. Identification of relevant information (details and data)	.418	.321	.081	.510	.351	.081	.090
2. Definition and use of vocabulary	.456	.322	.083	.567	.318	.081	.091
3. Construction of meaning from context (synonyms…)	.401	.201	.049	.435	.203	.054	.331
4. Overall understanding of the text: title, aim, etc	.541	.311	.799	.567	.331	.799	.102
5. Interpretation of contextual elements	.490	.223	.053	.598	.212	.051	.011
6. Recognition of contextual meaning	.499	.221	.021	.501	.211	.022	.261

Comparison: Results of Indicators in Reading Skills	Control (N=281) No ICT Program			Experimental (N=280) Twitter activities			Sig.
Indicators	Mean	St. Dev.	Error St.	Mean	St. Dev.	Error St.	p
7. Identifying main and supporting ideas, facts, opinions…	**.499**	.312	.032	**.532**	.222	.031	.021
8. Personal opinion on the content and form of the text	**.403**	.320	.080	**.558**	.321	.083	.090
9. Critical appraisal of the information obtained	**.502**	.319	.081	**.524**	.317	.080	.093
10. Identification of the intention of the text	**.520**	.199	.051	**.521**	.201	.053	.329
11. Identifies the source text.	**.482**	.301	.800	**.478**	.303	.798	.101
12. Self-reported level of understanding achieved	**.456**	.221	.051	**.499**	.219	.053	.013
13. Identification of relevant information (details and data)	**.499**	.219	.023	**.527**	.218	.021	.260

Table 6. Results of Indicators in Writing Skills (Post-Test results)

Comparison: Results of Indicators in Writing Skills	Control (N=281) No ICT Program			Experimental (N=280) Twitter activities			Sig.
Indicators	Mean	St. Dev.	Error St.	Mean	St. Dev.	Error St.	p
1. Clear presentation and adapted to the format	**.497**	.317	.079	**.503**	.321	.080	.089
2. Development of a previous script	**.486**	.319	.080	**.563**	.315	.079	.090
3. Organized development of the text (start, progress…)	**.511**	.199	.047	**.535**	.201	.051	.330
4. Use of appropriate vocabulary	**.461**	.301	.798	**.597**	.303	.799	.100
5. Using rich lexicon (quantity and variety)	**.485**	.221	.051	**.518**	.222	.050	.010
6. Construction of correctly spelled words	**.405**	.225	.023	**.516**	.221	.020	.260
7. Use of punctuation and graphic accents	**.501**	.302	.031	**.518**	.299	.030	.019
8. Using parts of speech, tenses, adjectives, connectors…	**.489**	.312	.081	**.492**	.313	.080	.091

Comparison: Results of Indicators in Writing Skills	Control (N=281) No ICT Program			Experimental (N=280) Twitter activities			Sig.
Indicators	Mean	St. Dev.	Error St.	Mean	St. Dev.	Error St.	p
9. Using sentence patterns.	.500	.317	.083	.493	.315	.081	.090
10. Use of types of texts according to intention, situation	.516	.201	.052	.553	.202	.050	.320
11. Integration of support elements (pictures, graphics…)	.401	.311	.799	.497	.312	.796	.102
12. Review and self-correction of the text	.464	.223	.049	.571	.218	.050	.011
13. Self-reported text	.431	.217	.019	.513	.219	.020	.261

Discussion

By using mobile technology, teachers can provide efficient collaboration enabling portable devices to support creative ideas for interactive learning (Vazquez & Sevillano, 2011). By carrying mobile devices with digital devices for promoting communication learners can acquire the necessary knowledge to make decisions and solve problems in real situational contexts. Knowledge and environments are interrelated, which means there are abundant learning resources in social networks, resources, and physical environments. The best choice for learners is to obtain knowledge and skills via activities in real environments, which is the purpose of developing key competencies (European Reference Framework, 2006).

The results show how using Twitter improved almost all the indicators used in the Spanish national assessment tests of key competencies (reading and writing skills). Reading skills were improved substantially:

- Identification of relevant information (details, data) (+.098).
- Definition and use of vocabulary (+.111).
- Interpretation of contextual elements associated with text comprehension (+.108).
- Interpretation of mechanisms of internal reference (pronoun substitution, ellipsis, hypernyms, etc.) (+.095).
- Identification of main and supporting ideas, facts and opinions, and real and fantastic aspects (+.155).

Writing skills were also improved substantially:

- Development of a previous script (+.077).
- Use of appropriate vocabulary (+.136).
- Construction of correctly spelled words.
- Integration of support elements (pictures, graphics, typographic features, etc.) (+.096).
- Review and self-correction of the text (+.107).
- Self-reported text (+.082).

According to the responses to open questions in the interviews of the teachers and students, besides improving language skills, the use of Twitter at secondary schools develops the following capabilities in the students:

- Promotes interactivity and dynamism (mean: 70.5%).
- Fosters collaborative and supportive work in virtual communities (mean: 60%).
- Generates a collective identity, promoting self-learning and self-discovery (mean: 87%).
- Develops critical attitudes toward the social reality and the problems of human coexistence (mean: 64%).
- Promotes the practical application of new technologies in learning subject contents (mean: 48.5%).

Social media can make a difference in the classroom because they provide a comfortable environment for young people, even for families. Far from the structures and scaffolds of essays and other forms of "formal" writing, Twitter allows them to express themselves while giving them the opportunity to focus on the ideas and concepts behind what is being taught. It empowers students in developing and shaping their own queries in a natural and flowing manner. Therefore, we can point out some of the Twitter activities used by the teachers and students in our research (open questions and direct observation in classes) that are more useful for developing linguistic competence:

Table 7. Twitter activities for developing linguistic competence.

Indicators for developing linguistic competence	Twitter activities for promoting linguistic competence
• *Identification of main and supporting ideas, facts and opinions, and real and fantastic aspects.* (Teachers: b2, b5, b7)	*Paradox of the day:* A paradox is a powerful stimulus for reflection. It can also demonstrate the limitations of the tools of the human mind. Citing a paradox everyday and thinking about it in 140 characters is a powerful resource for the development of ideas and feelings.

Indicators for developing linguistic competence	Twitter activities for promoting linguistic competence
• *Interpretation of contextual elements associated with text comprehension.* (Teachers: b1, b12, b15)	*Reading assignment summaries*: Students can build 140-character summaries based on reading assignments, forcing a focus on quality with instant feedback. Twitter makes it easy to get instant approval and disapproval of discussions and issues right inside and outside the classroom.
• *Identification of main and supporting ideas.* • *Definition and use of vocabulary.* (Teachers: b3, b6, b11)	*A haiku* or "a story in six words" is a concept that began when Ernest Hemingway was challenged to write a story in six words. Twitter is a perfect tool to convey a concept or a story with as few words as possible.
• *Interpretation of the communicational context.* (Teachers: b2, b4, b17)	*Creating a common history*: Students construct a story, contributing to each one with a line about topics shown in the classrooms. This is also really useful for tracking extracurricular activities. Whether it is a field trip or a long journey, students can log and track their progress and opinions.
• *Assessment of interest and relevance of content.* • *Self-reported text.* • *Integration of support elements (pictures, graphics, typographic features, etc.).* (Teachers: b6, b9, b13)	*Staying on top of the learning process*: Students are asked to tweet and reply about what they are learning, the difficulties they have faced, tips, resources, and more as in an online logbook. *Inspirational quotes of the day*: Allow students to become more familiar with Twitter and to exercise reading and writing skills by having a student post an inspirational quote tweet each day, preferably relating to the course content. *Link sharing*: With Twitter, students can share websites with the class, making relevant link finding and sharing a classroom assignment. *Collaborative event watching*: Students can "watch" presidential debates, political speeches, and other important events together outside of class time and then continue the discussion back at school.
• *Use of specific vocabulary.* (Teachers: b1, b2, b14)	*Daily word games*: Students are asked to unscramble anagrams, contribute synonyms, or give vocabulary definitions on Twitter about certain topics or general events.
• *Use of grammatical structures.* (Teachers: b9, 12, b14)	*Grammar practice*: Students can tweet sentences using a particular word to build vocabulary learning. *Grammar review*: Students can tweet using the past tense, run-on sentences, compound sentences, and more.
• *Identification and interpretation of relationships between the text and the content of other areas and situations.* • *Enjoyment of reading independently.* (Teachers: b7, b10, b12)	*Twitter poetry*: Create a collaborative poem to which each student contributes with one line. *Sharing microreviews*: Using Twitter, students can write a short review of movies, books, and music that they have (or have not) enjoyed.

Conclusions

Mobile devices are seen to be a major delivery vehicle for multimedia learning content in the coming decades. With these devices, learners can interact with thousands of content objects available on the Internet. Further, mobile devices enable learners to build virtual communities around media sharing applications, social networks, and Web 2.0 applications. All these digital resources can be adapted for use with a didactic approach as we have done in this research with Twitter. However, as mobile devices become more available, researchers and practitioners in instructional design will need to develop a greater insight into the best ways to use mLearning and Web 2.0 technologies in tandem. The use of digital resources for the promotion of digital literacy is one of the key elements of current teaching approaches. An active citizen has to be integrated with competence into the networked world with powerful strategies for personal, professional, and academic development to exploit the use of digital resources and information and be an active initiator and activator of contents. The generalization or extension of mobile and internet technology are the two determining factors to promote access to information and knowledge anytime and anywhere.

Our work explores the use of Twitter as a powerful communication tool for active learning in developing linguistic competence and provides the first detailed analysis of how Twitter has been used to foster reading and writing skills in secondary compulsory education. Our main finding is that the use of Twitter contributes substantially to the improvement of many indicators of linguistic competence used in the Spanish national exams. The research shows how Twitter can improve the results in many indicators of linguistic competence, which are fundamental for adequate language performance inside networking and Internet sites, with very good results in normal writing and reading outside Web 2.0 applications. Students can also use Twitter as a didactic application when doing schoolwork at home. Twitter is really effective in promoting interaction and collaboration among teachers and students, and it is a useful and creative resource for sharing short inspirational thoughts and practicing the language by getting inspiration from others.

The use of digital media promotes personalized self-directed learning, which in turn contributes to enabling students to engage in lifelong learning. The interactive, not exclusively receptive, use of digital media under the professional supervision of teachers requires students to develop media competencies both in terms of methodology and content. The ability to work collaboratively with other people to produce new knowledge via the Internet is a key competence in this digital age. Beyond its practical benefits (it is cheap, fast, and allows free flow of ideas), contact

with other people may provide extra motivation that spurs creativity and innovation. By working with digital media, students become aware of and experience for themselves how important it is to continually develop skills and competencies.

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Factors Shaping the Historical Consciousness of Pupils, Students and Teachers in Czech Schools

Abstract

This study presents the partial results of empirical research on historical consciousness among pupils, students and teachers in Czech schools implemented in 2011. Mixed qualitative and quantitative research was performed (focus groups, questionnaires, in-depth interview) with a group of 2524 respondents from 9 regions in the Czech Republic. This article clarifies its theoretical and methodological basis, and presents findings related to the factors shaping historical consciousness, especially incentives leading to interest in history, preferred sources of information about history, subjective evaluation of influences determining the development of human history, and respondents' concepts of historical development. Research results are being compared with the results of previous studies, including international studies.

Key words: *history didactics, quantitative and qualitative research on historical consciousness, history teaching, factors shaping historical consciousness*

1. Introduction

The current research on history didactics is headed in two main directions. The first investigates the way history is currently being taught at schools, especially the way the newest theoretical findings are being introduced into practice. The second research direction focuses on a comprehensive investigation into historical consciousness and its individual elements. This empirically hard-to-grasp socio-cultural phenomenon has been regarded since the 1970s as a fundamental category

in history didactics, and its cultivation is the highest goal of history education (Erdmann 2008, Beneš 2002).

Up to now only partial aspects of historical consciousness have been researched in the Czech environment, mainly in the work of the research team of B. Gracová and D. Labischová of Ostrava University (Gracová 2006, Labischová 2011). Among the more successful projects was the international research project *Youth and History* (1995) and a study by J. Šubrt's team *Historické vědomí obyvatel České republiky*, which examines the issue through the prism of sociological research (Šubrt, 2010).

2. Goals, characteristics, and methodology of research

The necessity of concentrating research interest on more general aspects of historical consciousness among pupils and pedagogues, and the way these are shaped within the school and out-of-school environment, resulted in the realization of an extensive didactic *Research on Historical Consciousness in Teaching*,[1] the aim of which was to ask students in elementary and secondary schools, students of education, and teachers of history questions about historical consciousness, and identify the influence of one's concept of history on the way students view the past.

Characteristics of research	
Type of research	Mixed design
Methods and techniques used	Focus group, questionnaire, in-depth interview
Type of survey questions	Scale, open, multiple-choice, graphic
Size of questionnaire	5 variant questionnaires for 5 groups of respondents
Sample set	2524 respondents: 710 elementary school students (aged 15), 624 secondary grammar school students (aged 18), 586 secondary trade school students (aged 18), 347 university students of history teaching, 257 history teachers
Place of research	9 regions of the Czech Republic: Prague, Ostrava, Brno, Olomouc, Pilsen, Ústí nad Labem, Český Těšín, České Budějovice, Hradec Králové
Time of realization	2–6/2011: focus groups I (6) and questionnaire survey; 8–12/ 2011: focus groups II (2), in-depth interview (2)
Software for data analysis	Remark Office OMR, SPSS

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[1] This research was part of PdF OU grant project *Multicultural Aspects of Education in Social Humanities Subjects and Their Reflections in the Historical Consciousness of Students* (2011), supported by the Ministry of Education subsidy program; Implementer D. LABISCHOVÁ.

For the clarification of the concept of the survey it is important to outline the structure of historical consciousness as it is set out in the professional literature. We refer mainly to the German didactic tradition, especially the structural-analytical concept of historical consciousness by H.J. Pandel (1987) and the updated model by M. Sauer (2009), which is based on it; also the theoretical concept of Z. Beneš (1995), the research premises of J. Šubrt (2010), and the concept of historical consciousness in the international study *Youth and history* (Klíma et al. 2001). The previous research experience of the D. Labischová and B. Gracová team is also important.

On the basis of the above-described theoretical and empirical observations, we have worked out a structural scheme (Figure 1) of historical consciousness and its dimensions and elements that have been the subject of previous research.

Figure 1. Structural schema of historical consciousness (Labischová 2012: 184)
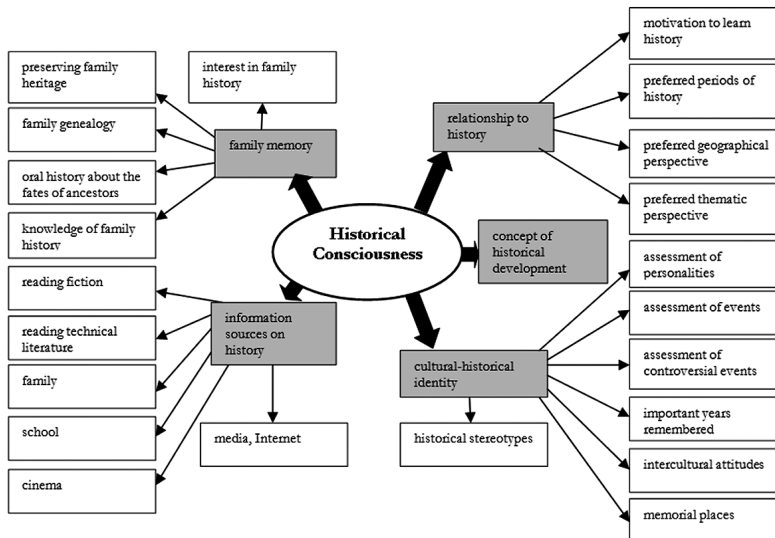
This study presents partial research findings related to the first goal. Z. Beneš (2011: 200) points out the difference between historical information and historical fact; he sees history education as "*a way to get historical fact out of historical information, bearing in mind that it can never achieve its strategic goals, that it can only achieve partial success.*" In the research presented here we follow selected aspects of the process of shaping historical consciousness, based on Beneš's thesis that

history education is an open system, and the shaping of historical consciousness is subject to a number of influences, of which school is far from the most important. These include:

- Motives leading to interest in learning about the past
- Preferred information sources about history
- Subjective evaluation of factors that play a part in shaping historical consciousness in society
- Subjective evaluation of factors influencing the character of human history
- The ideas of pupils, students, and teachers of history about the laws of historical development (an intuitively constructed "philosophy of history")

For the best way to get a handle on this problem we selected a mixed methods research design combining qualitative and quantitative research principles (for more info. cf. Hendl 2005, Složilová, 2011).

In the first phase, five-hour long focus groups were held with university students and instructors. According to I. Gillernová (2000: 165) the advantage of using this technique lies in the ability to do exploratory research and get a better insight into the problem. It also takes advantage of group dynamics to focus on the most important issues (Hendl 2005: 184). For research on historical consciousness, the first to make use of focus groups in the Czech context was J. Šubrt (2010).

Group interviews were recorded on a dictaphone and transcribed verbatim. For data analysis open coding was selected. Texts were segmented into data units, given a code, and a system of categories and super-categories was created (Švaříček, Šeďová 2007).

After data analysis, five versions of the questionnaire were put together for the second phase of the research; the construction of the questionnaires was based on analysis of the focus group findings, as well as the above literature. Data from the quantitative study was evaluated with the help of the software Remark Office OMR and SPSS. On the basis of statistical findings, additional in-depth interviews with history teachers were performed to find answers to the questions that came up in the second part of the study, and thus dig deeper into the problem.

3. Research findings

The primary motivations for learning about history are the attitudes and values of individuals in relation to their personal, family, or local history on the level of so-called small history, but also the historical development of human society more generally. The question "*What got you interested in history?*" was posed to

university students of history teaching and teachers at elementary and secondary schools in five focus groups.

Analysis of open coding identified the five most frequently-cited motivational impulses, and operationalized into closed questionnaire items, and the variant answer "*Not interested in history*" was added in view of the questionnaires intended distribution to elementary and secondary schools, where this answer could be expected.

Graph 1. Motivations for interest in history (%)
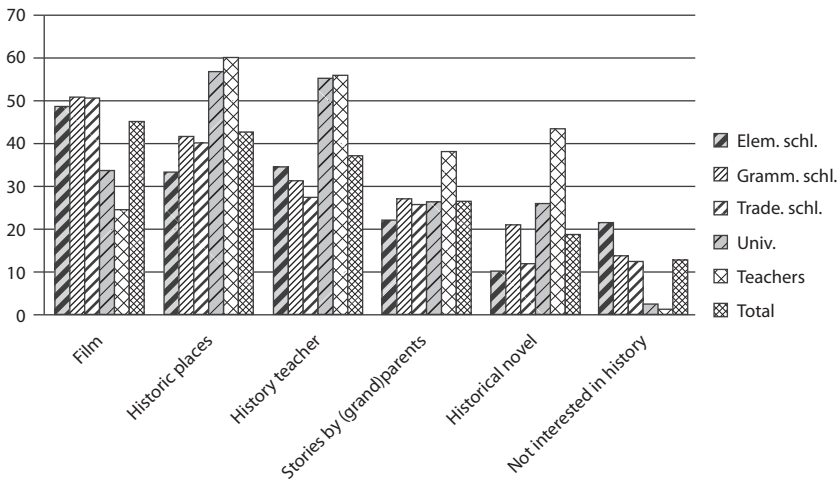
As Graph 1 shows, answers vary to a great degree among the individual groups surveyed. Only a small percentage of the students and teachers (2.4% and 1.2%) said they were not interested in history. These are probably individuals who study history just to get some kind of university degree. What is interesting is that there is no major gap between the students attending secondary grammar schools (13.7%) and the secondary-level students attending more practically-oriented trade schools (12.4%), although we would have expected a greater interest on the part of the general-education grammar school students. 21.4% of the elementary school students expressed disinterest in history.

The highest score was having watched some captivating historical film (half of all the elementary school students, trade school, and grammar school students). The teachers (60%) and university students (57%) more frequently cited historical monuments and museums. In the case of film, a statistically significant relation was

shown between film as a motivational impulse for interest in history, and film as a preferred information source about history (test chi-square, p-0.00).

Noteworthy is the influence of historical novels. A book was the motivation for 44% of the teachers, but only 26% of the university students, 21% of the grammar school students, 12% of the trade school students, and 10% of the elementary school pupils. The results show a decline in the influence of reading among the younger generation; what is also significant is the difference between women and men (women cited books, on average, 8% more often).

The figure of the history teacher also shows up in the responses, being the source of inspiration for 56% of the teachers and 55% of the students. Analysis of the focus groups and in-depth interviews indicates that the respondents were taken most of all by their teacher's enthusiasm for history, and the style of presentation:

"*Our teacher motivated me incredibly, because she was my model. She served up everything with such enthusiasm that I totally fell in love with history.*"

"*Our teacher at secondary school changed the method of presentation, didn't need any textbook, everyone listened to him and looked forward to the lesson.*"

"*I remember our teacher, she knew how to tell it. Because when a teacher cannot hold your attention, no textbook or any other teaching aids can save it. This woman knew how to tell it; the class just listened, because she served up some dramatic stories…*"

In this context we should note that respect for the history teacher and their interpretation is traditionally very high in the Czech environment. We can point to the international study *Youth and history*, which showed that the Czechs' enjoyment of (and trust in) their teacher's presentation is among the strongest of all the European countries included in the survey. The most appreciated is narrative, history based on a story (Klíma et al. 2001: 53–54).

The survey question about motivation to study history is closely related to the question about preferred information sources about history. Because of the size of the questionnaire, the question was given to the university students and history teachers only.

Graph G2 indicates that documentary films are the most important sources of information about the past (72%); this answer was given 10% more often by the teachers than by the university students, who credited the undergraduate courses they were then attending. The teachers relied much more often (17%) on history literature (67%). Here we would expect more frequent occurrence of this answer among the students as well, because university study should be founded on academic literature in the first place. In the survey we can probably see a manifestation of the social trend towards a preference for internet sources, as well as various

**Graph 2.** Sources of information about history
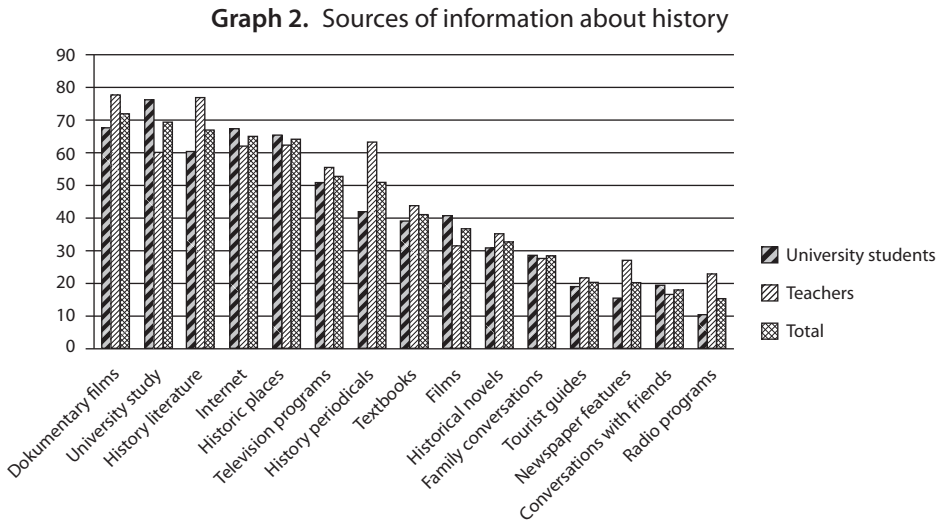
didactically-presented information (study aids, power point presentations); i.e., something of a retreat from research-oriented university study. This finding is again apparent in the latest academic findings presented in the specialized journals, where a major difference (21%) is found between teachers and students.

The results also show a heavy influence of audio-visual media in shaping historical consciousness. Besides film documentaries, a considerable influence was attributed to television programs (53%) and historical film dramas (37%), which motivate people to study history, and help shape attitudes toward the field of history (see above).

The study also looked for subjective evaluations of the factors that the respondents said had the greatest influence on shaping historical consciousness in Czech society. This question was included only in the questionnaires for the university students and teachers because it requires a certain level of maturity and analytical and critical thought.

The medialization of society, the socializing effect of the mass media and their specific constructions of social and historical reality, often manipulated (Jirák, Köpplová 2009), is seen equally by the students and teachers as a decisive factor in the dynamic process of shaping society's historical consciousness (59%). As shown in Graph G3, no less important to the respondents is the influence of personal experience (51%), which very strongly shapes the attitudes and values related to recent and contemporary history. From the didactic standpoint personal experi-

Graph 3. Subjective evaluation of factors
shaping historical consciousness
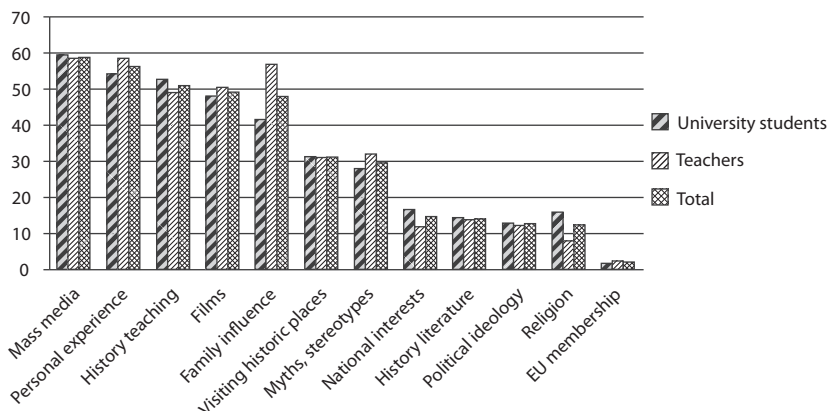
ence has enormous potential, and current trends in didactics in the field of history point to the use of methods and strategies that consciously work with personal recollection (oral history).

The majority of those surveyed are convinced that history teaching in schools has a fundamental influence on the level of historical consciousness among today's population; following close behind are film versions of historical themes (49%) and the influence of family (48%). Family influences are cited most often by the teachers (15% more), which is probably related to historical experience passed down from generation to generation; the influence of family memories usually grows in importance after starting one's own family.

Aside from learning from historical monuments, museums, and galleries, for 30% of the respondents a role was also played in the shaping of historical consciousness by a kind of mythologized lore (legends, myths, and historical stereotypes) representing an integral part of the collective memory of every culture (Rak 1994, Labischová 2005).

A lesser degrees of influence are attributed to state interests and ideologies, study of the newest findings in the academic literature, political ideology, religion, and membership in the European Union.

Graph 4 shows the respondents' ratings of the factors or "prime movers" that co-determine the character of human history. The question was posed to the secondary school and university students and history teachers. Variations on the

Graph 4. Subjective rating of factors
shaping the character of human history
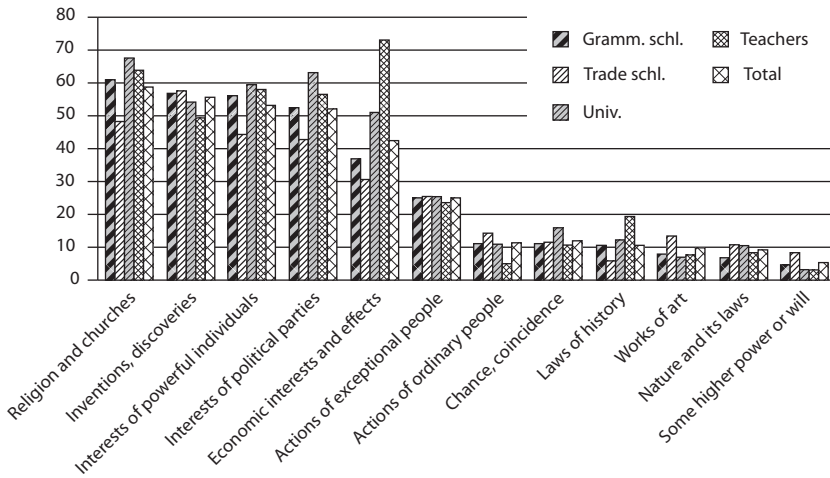
answers to individual items in the questionnaire were afterward re-created during focus group analysis.

Far and away the greatest influence is attributed to religion and churches (59 %; the lowest occurrence was among the students of secondary trade schools – 49 %, the highest among the university students – 68%). There is a major difference in the frequency of responses here compared to religion as a factor shaping historical consciousness – according to the respondents, religion and churches change history, but do not have as strong an influence on fundamentally shaping it.

Likewise high is the ranking given to technical progress, various inventions and discoveries (56%) that have driven human knowledge, whether its overall effects were positive or negative (e.g. advances in weaponry).

The majority of the respondents also cited power interests – by influential individuals, or entire political movements (52–53%); these figured mainly in the answers of the university students (10% more than average), and also the influence of changes in the economy (43% overall), where there were the largest differences between individual groups of the respondents (almost three-quarters of the teachers attribute a decisive influence to economic interests). A quarter of the respondents attributed a degree of importance to the actions of extraordinary personalities, as found in the answers by the students in focus groups: "*A strong*

personality. Or else a weak personality". "*If there had been no Hitler or Stalin, things might look different".*

Lesser degrees of influence were attributed to "a higher power or will", natural conditions, works of art, the laws of social development, chance, and the actions of ordinary people. With the concept of general laws of history, there are differences among individual groups of the respondents, where this answer was chosen by 20% of the teachers, but only 6% of the trade school students.

As a subjective way to express ideas about ones philosophy of history, or the laws of historical development, an associational method was employed, using graphic representation (curves). This type of inquiry was also employed in the international study *Youth and history* in the mid-1990s; the respondents could choose from five simple curves to answer the question: *things are generally improving, not changing, getting worse, repeating themselves,* and *going from extreme to extreme*, of which the most frequent response was *repeating themselves* (56 %, Klíma et al. 2001: 99).

In accordance with the trend towards the use of graphic methods in empirical studies abroad (Jenisch 2006), we used this method in our focus groups with the teachers and students, where three-person groups of respondents discussed, argued, and together created the curve. On the basis of the most frequently-appearing shapes produced by the focus groups, eight variant answers to choose from were included in the questionnaire for all the groups of respondents (along with *none of the above*).

Figure 2. Subjective ideas of university students and history teachers about the course of human development depicted graphically (samples from focus groups)
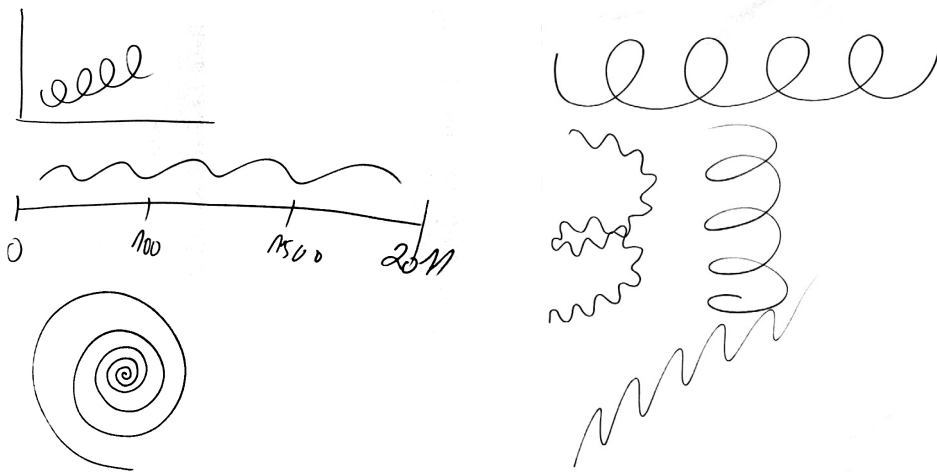
Figure 3. Associational question for all groups of respondents:
"Which of these curves best expresses the course of human history?"

*A*s shown in Graph 5, the ideas given by individual groups of the respondents often diverge greatly. Prevalent overall is the idea expressed by a rising wave line; i.e. individual stages of development with rise, climax, and fall, but always to a higher level of development (the decline phases of the later stages are higher than the climax phase of the previous stages). This variant corresponds to a certain optimism and belief in progress. It was most frequently given by the elementary school students (34%), least often by the university students (17%) and the teachers (15%). In comparison with the various types of secondary schools, the grammar school students viewed the direction of history more positively.

An alternating wave (sinusoid) corresponding to the theory of economic cycles is the second-most-frequently-chosen curve overall (24%). If the elementary school students are removed it becomes clearly the most frequent.

This is followed by a spiral (15%), which can be interpreted as an alternative to the spiral-cyclical model; it emphasizes circularity, as in the argument by one focus group participant: "*The lines getting farther apart mean human progress. And*

Graph 5. Subjective graphic representations
of the course of human history
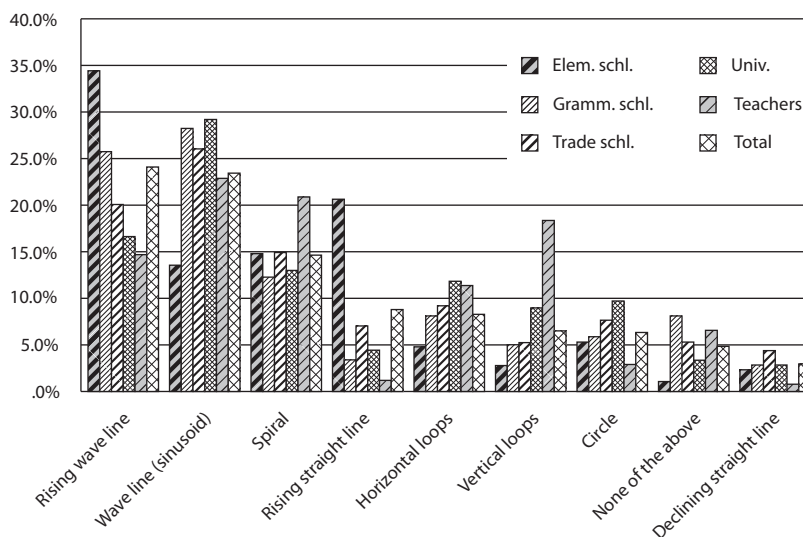
that it goes in a circle means that history is actually constantly repeating, as we've already said. And also, it's kind of a vicious circle." A spiral was chosen by 21% of the teachers; its frequency among other groups of the respondents was 6 to 9% lower.

The views of the youngest respondents on the course of human society diverge mainly in their choice of the straight rising line symbolizing clear optimism; this was the second-most-frequent answer given by the elementary school students (21%). Other groups addressed seldom chose this variant (1.2–7%).

The percentage occurrence of all other possible answers was less than 10% except for the rising spiral loops from the teachers (18%), who gave this alternative more often than the rising wave. This spiral-cyclical didactic model was also presented by Marxist historiography that influenced the education of history teachers in the era before 1989 (distinguished in our research from the rising straight line representing the rise from socialism to communism).

Linear curves were chosen rarely; all the groups of those surveyed preferred the optimistic variant of the rising line.

Because we expected a connection between the subjective evaluation of factors influencing historical development and its graphic representation, we used the method of inductive (inferential) statistics.

The respondents who saw inventions and new ideas as important factors in human history differed in their preference for individual curves. The chi-square test confirmed the statistical significance of the difference (p-0.002). This group more often chose a rising wave, and less often vertical loops or a declining straight line. Those surveyed who regarded economic interests and influences as the "prime movers of history" leaned towards the rising cyclical spiral (vertical loops). The circle was chosen most often by the respondents who regard religion and the church as most influential (these respondents least frequently selected the declining straight line). The statistical significance of the differences given was proven by analysis of adjusted residual to 95% of the level of significance.

5. Conclusion

The results of this study on the factors shaping historical consciousness may become an impulse for history didactics on several levels. Among the motives for learning about history, an important role is played by film renditions of historical themes; it would therefore be useful to develop models for analysis and interpretation of audiovisual media in education, and make more use of interdisciplinary media in history education. The respondents' preference for history taught as a story should lead to a deeper empirical study on this phenomenon, such as video study and other qualitative methods. Besides the mass media, film, and generally strong visual influences, an important role in the process of shaping historical consciousness is played by personal experience and family memory (or so-called small history). It would be highly suitable during instruction to make use of methods that allow these aspects of the past to be uncovered (oral history, multi-perspectivity). The study presented here may inspire further empirical investigations into historical consciousness also from the standpoint of methodology (mixed research design and use of graphic methods).

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Game-based Enhancement of Teaching Logistics and Supply Chain Management

Abstract

The paper focuses on the selection, application and evaluation of games suitable to enhance teaching and learning processes in two courses related to logistics and supply chain management (SCM) at the Faculty of Organizational Sciences, University of Belgrade. The selection procedure of logistics and SCM games which incorporates the database of these games and a multi-criteria analysis are designed and applied. Based on requirements to support practicing the distribution requirements planning (DRP) a new game has also been designed. The outcomes of post-game evaluation have shown that students like playing logistics and SCM games and that playing these games helps them learn something they have not previously known. The results of this study are useful for both academics and practitioners interested in training and education of logistics and supply chain (SC) professionals.

Key words: *games, games-based learning, logistics, supply chain management, education.*

Introduction

Educational institutions have a major responsibility to deliver appropriate courses in the right way to future logistics and SC professionals, and this will play an increasingly important role in modern business. One of the promising ways to improve efficiency of courses related to these fields is the introduction of games in combination with other teaching approaches. There are a number of logistics and

SCM games that can be applied in teaching and learning processes and, therefore, the main question here might be: How to select the most suitable games for specific courses? As a result, the instructors ready to change their role from a teacher to an enabler of the learning process (Chwif & Barretto, 2003; Deshpande & Huang, 2011) are faced with problems: availability of some kind of database that contains data about existing logistics and SCM games; preparation time to understand, test and select different games (Tan et al, 2010); costs of using games (Deshpande & Huang, 2011; Tan et al, 2010); setup time of games; justification of in-house game development; and valuation of outcomes of applied games. In light of this, the exchange of experience in logistics and SCM game playing among past, present and potential game users is valuable.

At the Faculty of Organizational Sciences (FOS), University of Belgrade, games have been employed as complementary teaching tools in courses of Business Logistics and Supply Chain Management. Business Logistics is compulsory and Supply Chain Management is an optional course in the undergraduate program Operations Management. The aim of the Business Logistics course is to provide undergraduate students with knowledge and skills in the fundamental concepts and methods of logistics management. The aim of the Supply Chain Management course is to provide the students with the understanding of strategic importance of SCs in the global environment, together with methods, tools, and activities necessary for efficient and effective SCM.

This paper is focused on selection, application and evaluation of games suitable to enhance teaching in these two courses. The paper is organized as follows: in the next section a brief theoretical background is given, then, a research methodology is presented with an emphasis on the custom-made selection procedure of games for specific purposes and the development of a new game for supporting DRP teaching. The results of the post-game evaluation are presented in the section named Evaluation of games. Finally, a discussion of the results and some concluding remarks are offered.

Theoretical Background

Nowadays, requirements for knowledge, skills and abilities have become ever more demanding and both students and their future employers have higher educational expectations. The new paradigm of e-learning with an emphasis on community, simulations, games, customized curricula, constructivist learning, and socio-cultural learning experiences has a 'potential to reshape the future of higher

education' and to find the best responses to new students and employers' demands (Chen et al, 2010, p.76). One of the key factors of success of the future paradigm of e-learning will be game-based learning (GBL), especially its subset known as digital game-based learning (DGBL). GBL can be viewed as the use of any type of game that supports learning/educational processes while DGBL is more specific and related only to the use of computer-based games for the same purposes (e.g. Breuer & Bente, 2010). Numerous researchers have pointed out a number of advantages of using GBL (e.g. Alkhanak & Azmi, 2011), emphasizing increasing students' learning motivation and problem-solving abilities (e.g. Kiili, 2005, Razak et al, 2012).

In general, a game is any activity with at least one established objective and an element of competition among players. One or more elements of competition must be involved in a game and they represent the core of a game (Kiili, 2005). It puts players in competition against each other or against standards (Rausch & Catanzaro, 2003), which Lewis & Maylor (2007) described as competitive and experimental opportunities to play. A game can be considered as an extension of simulation (Semini et al, 2006) and very often, a game comes out of simulation with addition of some elements of competition (Rausch & Catanzaro, 2003). A design method for 'games' in logistics management developed by Fumarola et al. (2012) goes further and determines the development of simulation as a prerequisite for a game design.

Games have advantages over simulations in terms of determining the adequacy of existing structures, policies or procedures; bringing more effective communications; enhancing learning; preparing people for coping with future situations; generating new ideas, and projecting uncertainty (Rausch & Catanzaro, 2003). Semini et al. (2006) connected using games and simulations with the scope of business operations and suggested games to be a more appropriate method than a simulation for learning and strategic decision-making in the macroscopic logistics and SCM environment. Tan et al. (2009) advocate using games and case studies to complement traditional lectures for teaching SCM.

A wide variety of games that can be employed in logistics and SCM education has been developed. Their direct predecessors go back to work done by Mary Birshstein between 1932 and 1940 in Europe on 'game' development for supporting training programs in production and distribution and by RAND Corporation in the 1950s in North America on 'game' development focused on the U.S. Air Force logistics system (Faria et al, 2009). Unquestionably, the most famous logistics and SCM game is Beer Game developed by Professor John D. Sterman at MIT in the early 1960s (e.g. Campbell et al, 1999, Zeng & Johnson, 2009). The list of eight publicly available logistics and SCM games suitable for students education was

provided by Campbell et al. (1999). Lewis and Maylor (2007) analyzed a wide variety of operations management teaching and training games among which they recognized ten logistics and SC related games. At the Tippie College of Business of the University of Iowa, the BizGames Project is conducted with the aim to collect and present information about available logistics and SCM games and games that can be applied in other operations management areas (cf. BizGames Project, 2011).

Methodology

A three-step research methodology was conducted in order to enhance the teaching process in Business Logistics and Supply Chain Management courses at the FOS. First, we designed and applied a custom-made selection procedure of suitable games which incorporated the database of available logistics and SCM games and a multi-criteria analysis based on instructors' assessment and computation of a game suitability indicator (GSI). Secondary data (e.g. Zikmund et al, 2010), mostly from the Internet and library sources were used for the creation of the database of logistics and SCM games. The instructors' demonstration and analyses were incorporated in some cases to avoid suggestions from other authors. Secondly, since there were no suitable games available for practicing the DRP logic, a new game was developed to be used as a supplement to distribution channels and DRP topics within the Business Logistics course. Thirdly, the selected games were evaluated by students during the summer semester of 2010/2011 and the winter semester of 2011/2012. Likert-type questionnaires (e.g. Kotzab et al, 2005; Zikmund et al, 2010) were prepared and used for the students' post-game playing evaluation.

Selection of games

The selection procedure of suitable games is designed for the purposes of the Business Logistics and Supply Chain Management courses at the FOS. With easy modifications, this procedure can be customized for specific purposes of logistics and SCM related courses at other institutions. It comprised the following steps:

1. Creation of the database of available logistics and SCM games;
2. Extraction of games based on criteria related to the cost of their usage;
3. Assessment of game suitability for requirements of courses; and
4. Revising and matching obtained results and needs in teaching logistics and SCM.

In the first step, the database of available logistics and SCM games was created and it included a total of 47 games (Figure 1). This database is available upon request from the first author. The results of the BizGames Project were very helpful for its creation. The database is comprehensive enough although it can be assumed that the number of included logistics and SCM games is not finite. The data for each game include: the name of a game, the author of a game, topics covered by using key words, the type of a game (manual, software or online), the number of players, duration, costs (free, institution's costs or student's costs), the year of introduction, and a link to the game and additional data about it.

In the second step the games were separated based on two established criteria related to costs:

1. Free games; and
2. Institution's costs for using games under $250.

The introduction of these criteria in the selection procedure was important because of limited financial resources. The application of these criteria on the initial database resulted in the selection of a total of 27 games for further analysis.

Figure 1: Initial game database

In the third step the assessment of game suitability for courses requirements was conducted based on a developed GSI. The GSI is a combined weighting of functionality, simplicity, duration and ease of setup. Functionality is assessed on a five-point scale, from 1 (very poor) to 5 (very good). Simplicity is assessed on a five-point scale, from 1 (very hard) to 5 (very easy). Duration is assessed on a three-point scale, from 1 (too long) to 3 (appropriate), where 'too long' means more than 6 hours and 'appropriate' means up to 3 hours. Ease of setup is assessed on a three-point scale, from 1 (hard) to 3 (easy). Thus, the maximum value of GSI is 225. Games with the value of GSI above 112.5 are selected for further analysis, and the total of 8 games satisfies this condition. They are presented in Table 1.

Table 1: Games selected on the basis of GSI

No.	Game	Function-ality	Simplicity	Duration	Ease of setup	GSI
1.	Computerized Beer Game	5	5	3	3	225
2.	Distribution Game	5	5	3	3	225
3.	Transportation Game	5	5	3	3	225
4.	Risk Pool Game	4	5	3	3	180
5.	Goldratt's Game	4	5	3	3	180
6.	Bucket Brigade	5	4	3	2	120
7.	Kanban Game	5	4	3	2	120
8.	MIT Beer Game	5	4	3	2	120

In the fourth step the selected games were reconsidered in relation with the specific needs of particular courses. The Kanban Game (developed by Welters under the supervision of van der Aalst) was decided to be used as a supplement to lean logistics topic and The Distribution Game (by Jackson and Muckstadt) as a supplement to a short overview of SCM topic of the Business Logistics course. Also, The Computerized Beer Game (by Kaminsky and Simchi-Levi) was chosen to be used as a supplement to a coordination and bullwhip effect topic, the Risk Pool Game (by Kaminsky and Simchi-Levi) to support the topic of risk pooling in the SC and The Transportation Game (by Jackson and Muckstadt) to support the topic of transportation and warehouse management in the Supply Chain Management course. There were some doubts which game to use: The Computerized Beer Game or the MIT Beer Game. The demonstration of these games showed that the students' progress in understanding the 'bullwhip effect' was harder when they used the MIT Beer Game online, and the students were recommended to use it at home. The Goldratt's Game and the Bucket Brigade game were left for some future

consideration. More than that, the need to actively support the topic about distribution channels and DRP method of the Business Logistics course was identified but no game could be found for that specific purposes. Hence, a new game (named DRP Game) was developed for practicing the DRP logic (cf. http://fon.fon.bg.ac.rs/~cvetic/drpgame.html).

Evaluation of Games

The games were evaluated by the undergraduate students of the Business Logistics and Supply Chain Management courses at the FOS during the summer semester of 2010/2011 and the winter semester of 2011/2012. The students were asked to rate their experience with playing certain games on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The total of 24–27 students participated in the evaluation of the games. In general, the results show that the students had very positive experience with logistics and SCM games. The selected results of games evaluation for this paper are presented in the form of a radar chart in Figure 2. The students gave the highest scores related to the statement that a certain game was interesting to the DRP Game (mean (M) 4.92, variance (V) 0.08, standard deviation (SD) 0.28), Distribution Game (M 4.67, V 0.41, SD 0.64) and Transportation Game (M 4.41, V 0.64, SD 0.80). These results were unexpected because the DRP Game is a manual game, and Distribution Game and Transportation Game originate from the 1990s. The students reported that playing Risk Pool Game (M 4.96, V 0.04, SD 0.20), DRP Game (M 4.76, V 0.27, SD 0.52) and Distribution Game (M 4.67, V 0.32, SD 0.56) was very easy. The lowest scores regarding the ease of use were given to the Computerized Beer Game (M 3.56, V 1.18, SD 1.09) and this can be explained by the observed expectations of some students to achieve the best scores playing a game in a very short period of time. Their dissatisfaction with their own early results affected the assessment of this statement. The students gave the highest scores to the DRP Game (M 4.64, V 0.32, SD 0.57) and the Transportation Game (M 4.19, V 0.46, SD 0.68), related to the statement that playing a certain game helped them learn something they had not previously known. Obviously, according to these results, learning and practicing of DRP logic were influenced by the DRP Game. Finally, the students were very positive about having more games like those to be used in teaching processes. It should be noted that the results of the evaluation of the DRP Game should be considered with caution because it is possible that they were influenced by the fact that the students knew that the game had been developed at the FOS.

Figure 2: Students' view on games (mean values)
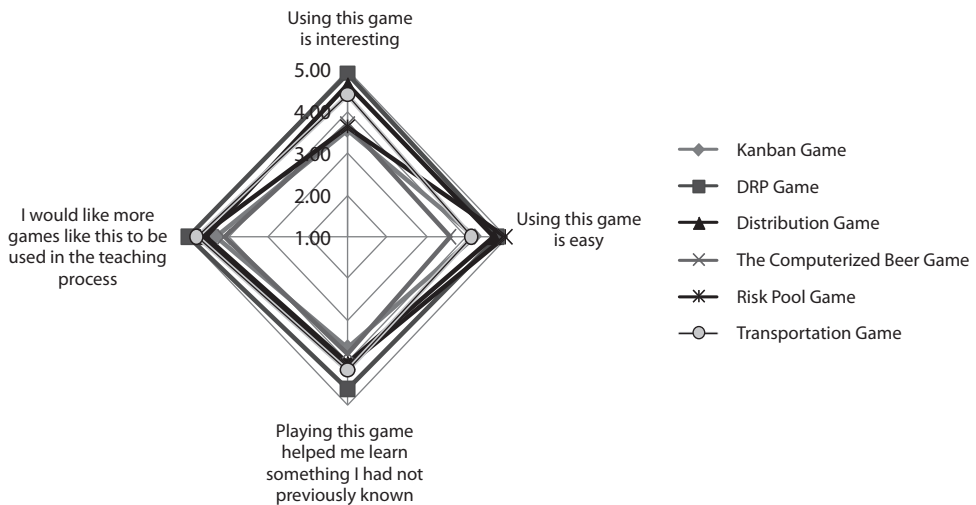
Discussion of Results

The exchange of experience among the logistics and SCM game users is valuable for the improvement of existing courses and the development of new ones. Several attempts have been made to collect and present information about available logistics and SCM games (Lewis & Maylor, 2007; BizGames Project, 2011). Based on these sources and other secondary data, the database of total 47 available logistics and SCM games was created. After the completion of the evaluation in the winter semester of 2011/2012, the database was updated with the HECOpSim game (Pasin & Giroux, 2011). This database could be helpful for other academics and practitioners interested in game-based enhancement of teaching logistics and SCM.

The selection procedure of suitable games was designed to meet specific requirements of two courses at the FOS. The main constraints were related to the costs, and therefore two criteria to exclude games were made: games should be free for students and the institution's costs for using games should be under $250. These criteria can be considered important by other instructors who work in the austerity of academic environments. The GSI, which is developed within the selection procedure, presents the combined weighting of functionality, simplicity, duration and ease of game setup. Potential interested parties can adapt this GSI according to the needs of their courses or training programs, or they can apply some other

methods for assessment of game suitability, such as Analytic Hierarchy Process, Analytic Network Process, etc.

A lack of games for the simulation of the DRP method was identified and a new game which enables students to cooperate within teams and practice the logic of DRP was developed. For players of this game, the general prerequisite is some previous knowledge of DRP logics and basic lot size models. The DRP Game is free and can be easily adapted to a certain number of players (not fewer than nine). It can be useful for supporting topics such as distribution channels, DRP, integrated MRP-DRP system and other similar topics.

The results of using the six games for actively supporting two courses at the FOS showed that the students liked playing logistics and SCM games, they learned something from playing these games that they had not previously known and they would like to use more games like those in the teaching process. The instructors were very surprised at how the students evaluated The Distribution Game and The Transportation Game. The scenarios of those games were amusing for the students and they were very interested in playing them even though the games originated in the 1990s. Also, the DRP Game unexpectedly got very high scores from the students, but these results should be considered with caution. It is possible that the students were not objective in awarding scores to this game because of its origin. The obtained study results are encouraging for the use of logistics and SCM games although they are based on small samples of students.

Comparison of post-game evaluation results between different generations of students was not provided. Therefore, to make this possible, the same post-game questionnaires will be used for the next generation of students. Also, we consider using pre-game questionnaires in order to provide a better basis for testing whether students really learn something playing these games that they have not previously known.

Conclusion

As complexities have increased in the global business and as the struggle against the economic crisis is still ongoing, the valuable competencies of logistics and SC professionals are more required (Corsi et al, 2006). Educational institutions are facing the challenge to satisfy these demands with right courses performed in the right way. At the FOS, a decision was made to examine the perceived potential of GBL in Business Logistics and Supply Chain Management courses. The results show that games enable students to gain positive experience in solving certain

logistics and SCM issues. They enable instructors to better motivate, train and teach students. Furthermore, it is expected that industry and economy will have to hire better skilled graduates (Sweeney et al, 2010).

The main contributions of this study are: (1) creation of the database of available logistics and SCM games which can be helpful for present and potential logistics and SCM game users; (2) development of a custom-made selection procedure of suitable games which, among other things, includes the GSI; (3) development of a new game for practicing the logic of DRP which, according to the authors' knowledge, is the first game related to the DRP; and (4) evaluation of six applied games from students' viewpoint. We intend to further enhance and improve teaching and learning activities in the Business Logistics and Supply Chain Management courses in future.

Acknowledgement

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Informal Learning as an Educational Resource

Abstract

Currently, informal learning does not have the appropriate status of generally accepted measures related to education. The values and methods of informal learning are less present than the principles, values and methods that are placed and given in schools, colleges and universities. Expansion in the development and application of information technologies in all spheres of society requires a new, wider and more varied knowledge. Therefore, this principle can be difficult to comply with for formal education, which means it can be difficult to meet all individual and social needs. On the other hand, informal learning is not sufficiently utilized.

For all these reasons, it was necessary to further investigate to what extent high school students are information literate and what are the factors that influence the level of students' information literacy. Are they considered to be educational institutions, families, peers, the Internet, mass media, …? Whether and to what extent do informal learning and specific learning activities to help you 'learn', not even noticing that you are 'learning', have an impact on the level of students' information literacy?

The study was conducted in high schools and vocational schools in the territory of AP Vojvodina, and the survey included 377 fourth grade students. After the realization of the research, analysis of collected data and interpreting the results obtained, we came to final conclusions of our research: informal learning significantly affects the level of information literacy of students in secondary schools, or by using informal sources of knowledge contributes to increasing the levels of IT, digital and multimedia literacy of students.

Introduction

Information literacy has become the focus of educational institutions at all levels. This requires a commitment to learning throughout life and the ability to find and identify innovations that are necessary to keep pace with the changes.

There is no doubt that the coupling of information and communication technology (ICT), which is now available to us, has the potential to offer complete access to knowledge and knowledge sources, which are necessary in order to achieve high standards of learning in many areas. Anyone, regardless of age, anywhere and anytime in the near future will be able to access learning resources and online support from experts, and system verification of acquired knowledge, which will together provide a complete learning program and support.

Education has an obligation to be up to date with the latest IT developments and the use of new technologies. The educational system, as a basic task, sets the requirement that each individual develops his own potentials, to enable himself to use his knowledge to improve it, to select what is important in a given context and to understand what has been learned. Settlement of the said task is not easy but one thing is certain: changes and adjustment of the content, approaches, structures and strategies in education, as well as an inclusive approach to pupils are starting points for fulfilling the task.

By accepting and embracing the modern technology, educational institutions should themselves become initiators of all the above-mentioned changes. The main objective of introducing modern technology in teaching is to facilitate the path to acquiring skills and knowledge to make it more durable. Apart from financial resources it depends on subjective factors – teacher and student, of one's willingness and ability to work with modern technology. The nature of man is to fear and resist the introduction of new methods. It is a natural fear of change, beliefs regarding the negative impact of these new methods as well as the inability to overcome the 'obstacles' to introduce new methods. That is the case when one needs to enrich teaching with modern technologies, but also open doors to students of informal learning, which will fill in the gaps in the field of possession of skills, making visible the knowledge and skills. This will positively affect the motivation of students as explicit recognition of what people know and can do provides an experience of their own values. ICT will greatly contribute to their knowledge to be current, developmental, have research character and technology. Simply, both students and teachers of today must know how to use modern methods and technology in education.

It is equally important that students are not only IT but also information literate and possess knowledge of what is a computer and information literacy and just how significant their meaning for today's education is.

The research contribution of informal learning to students' information literacy

To check the above statement, it was necessary to investigate expressed questioning, which was realized in April, 2012. This research was done using descriptive methods relating to the collection, processing and interpretation of data. The aim of the research study was to examine the attitudes of students to determine the extent to which informal learning, as an educational resource, affects the level of information literacy of students, i.e. , whether the use of informal learning resources can increase the level of IT knowledge and skills of students in secondary education. The research tasks were derived from the set of goals in order to determine the exact indications and findings in the extent to which informal learning affects the level of information literacy of secondary school students, to examine and determine the extent to which the use of informal sources of knowledge affects the computer, digital and multimedia literacy of high school students. Independent variables in the study were gender affiliation, type of school (high school, vocational school) and place of residence (village, city-suburb). The dependent variable was defined as students' attitudes toward using the resources of knowledge adopted and informal learning in the area of computer usage and IT technologies. The dependent variable was operationally defined by respondents / CA on a scale of attitudes as a continuous variable interval level of measurement. The study aimed at confirming the assumption that informal learning significantly affects the level of information literacy of students in secondary schools, or that by using informal sources of knowledge, it contributes to increasing the levels of IT, multimedia and digital literacy of students.

The research and interviewing scaling technique was applied, and instruments accounted for attitude scales and questionnaires. The attitude scale used a five-point Likert scale for measuring the intensity of agreement or disagreement with a given statement (70 claims).

The sample consisted of fourth grade pupils in grammar schools and secondary vocational schools in AP of Vojvodina, where classes are held in Serbian and Hungarian. The study involved 377 students, and statistical data processing was performed by using the statistical software package for data processing – SPSS 17.0

Research results

Cronbach's alpha coefficient, reliability of the scale of attitudes was tested and it was α = 0.909 for the total of 70 items (Table 1.1), which indicates a highly satisfactory reliability and possible applications of this scale in the examination.

Table 1.1. Reliability of the scale (indicator) of attitudes

Reliability Statistics	
Cronbach's Alpha	N of Items
.909	70

This paper presents the following (separate) descriptive statistical indicators of variables (frequency) showing the extent to which high school students believe that knowledge in the field of using computers and ICT resources is acquired by using informal learning:

On the basis of the frequency of the responses the following can be determined:

1. in addition to textbooks, the participants find information and knowledge about ICT to the least extent by using professional literature and journals, and is very similar to the information and knowledge gained through educational programs on TV, but the resource through which the students gain information and knowledge is their communication with friends, a resource that is mostly used for gaining information and knowledge according to the Internet (77.2%).

2. the statement that knowledge on how to use the Internet, electronic books and electronic sources of knowledge, was gained outside of school (independent, communicating with friends, using professional journals or using the Internet), was considered as generally true by 14.1% of the respondents and 72.7 % of the respondents considered it as accurate, which amounts to 86.8% of the respondents

3. the statement that knowledge about the use of electronic mail has been gained outside of school (independent, communicating with friends, using professional journals or using the Internet), was considered as largely true by 20.4% of the respondents and 59.2% of the respondents said it was very accurate, which amounts to 79.6% of the respondents

4. the statement that knowledge about the use of forums on the Internet has been gained outside of school (independent, communicating with friends, using professional journals or using the Internet), was considered as largely

Table 1.2. Frequency of response to the statement in the questionnaire: Knowledge about the Internet and how to use electronic books and electronic sources of knowledge gained out of school (independent, communicating with friends, using professional journals or using the Internet)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very inacurate	9	2.4	2.4	2.4
	mostly inaccurate	11	2.9	2.9	5.3
	not sure	30	8.0	8.0	13.3
	mostly accurate	53	14.1	14.1	27.3
	very accurate	274	72.7	72.7	100.0
	Total	377	100.0	100.0	

Table 1.3. Frequency of response to the statement in the questionnaire: Knowledge of the use of electronic mail received outside of school (independent, communicating with friends, using professional journals or using the Internet)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very inacurate	26	6.9	6.9	6.9
	mostly inaccurate	23	6.1	6.1	13.0
	not sure	28	7.4	7.4	20.4
	mostly accurate	77	20.4	20.4	40.8
	very accurate	223	59.2	59.2	100.0
	Total	377	100.0	100.0	

Table 1.4. Frequency of response to the statement in the questionnaire: Knowledge about the forums on the Internet gained out of school (independent, communicating with friends, using professional journals or using the Internet)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very inacurate	11	2.9	2.9	2.9
	mostly inaccurate	5	1.3	1.3	4.2
	not sure	27	7.2	7.2	11.4
	mostly accurate	57	15.1	15.1	26.5
	very accurate	277	73.5	73.5	100.0
	Total	377	100.0	100.0	

Table 1.5. Frequency of response to the statement in the questionnaire: Knowledge about the forums on the Internet gained out of school (independent, communicating with friends, using professional journals or using the Internet)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very inacurate	14	3.7	3.7	3.7
	mostly inaccurate	10	2.7	2.7	6.4
	not sure	25	6.6	6.6	13.0
	mostly accurate	34	9.0	9.0	22.0
	very accurate	294	78.0	78.0	100.0
	Total	377	100.0	100.0	

Table 1.6. Frequency of response to the statement in the questionnaire: Knowledge about the forums on the Internet gained out of school (independent, communicating with friends, using professional journals or using the Internet)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very inacurate	38	10.1	10.1	10.1
	mostly inaccurate	20	5.3	5.3	15.4
	not sure	54	14.3	14.3	29.7
	mostly accurate	52	13.8	13.8	43.5
	very accurate	213	56.5	56.5	100.0
	Total	377	100.0	100.0	

true by 15.1% of the respondents and 73.5% of the respondents considered it to be very accurate, which amounts to 88.6% of the respondents

5. the statement that knowledge of how to download information on the Internet has been gained outside of school (independent, communicating with friends, using professional journals or using the Internet) was considered as largely true by 9.0% of the respondents and 78.0% of them considered it as very accurate, which amounts to 87.0% of the respondents

6. the statement that knowledge to create a blog on the Internet has been gained outside of school (independent, communicating with friends, using professional journals or using the Internet), was considered as generally true by 13.8% of the respondents and 56.5% of them considered it as very accurate, which amounts to 70.3% of the respondents

7. the statement that knowledge about the use of WiFi networks has been gained outside of school (independent, communicating with friends, using professional journals or using the Internet), was considered as largely true by 14.1% of the respondents and 71.6% of them considered it as very accurate, which amounts to 85.7%

8. the statement that knowledge of how to set the video on Youtube has been gained outside of school (independent, communicating with friends, using professional journals or using the Internet), was considered as largely true by 12.2% of the respondents and 74% of them considered it as very accurate, which amounts to 86.2% of the respondents

9. the statement that knowledge about how to install and use antivirus software has been gained outside of school (independent, communicating with friends, using professional journals or using the Internet), was considered as generally true by 18.00% of the respondents and that 58.1% of them considered it as very true, which amounts to 76.1% of the respondents

10. the statement that there is no need to obtain information and knowledge on ICT for education in the school fully complies with the current events in the field of ICT and is favored by only 13.5% of the respondents

Conclusion

"All people learn, consciously and unconsciously, their whole life and have a right need for their learning to be recognized and supported in all forms and at all places. " (Dohmen, G. 2001)

The continued and accelerated scientific and technological development, particularly the expansion of modern and postmodern forms of technology assume that highly educated population is able to effectively participate in social processes and benefits of ICT available, or has information literacy. Today's educational trend is characterized by a tendency towards individualization and flexibility, creating the need to learn anytime and anywhere, through formal and informal education and informal learning.

Research has shown that informal learning is an important educational resource and a large number of subjects is taught in informal contexts. There was a prerequisite before the study itself that one of the most frequently informal learning resources is the Internet (which was confirmed by the research), therefore this paper presents extracted and descriptive statistical indicators of variables (frequency), which confirmed that a very large percentage of the respondents on

the use of ICT gained their knowledge outside of the formal education system. It should be noted that the respondents believe that, in addition to formal sources of knowledge, there is a need for other ways of obtaining information and knowledge on ICT as teaching at school does not follow current events in the field of ICT. Also, based on research results, such a conclusion implies: *informal learning significantly affects the level of information literacy of students in secondary schools, or the use of informal sources of knowledge contributing to increasing the levels of IT, multimedia and digital literacy of students.*

The problem of information literacy, as global political and educational settings, affects many educational systems in the world with the question 'what next'. How to achieve an appropriate level of information literacy? One thing is certain, informal sources of knowledge and informal learning are indispensable in this way because it has become clear that formal education is no longer able to flush the development of ICT and to fulfill the requirements of quantitative and qualitative permanent education.

Thus, we must continue dealing with informal learning, further investigating it and with a serious scholarly work we can explore the possibility of following the above guidelines.

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Self-Regulated Learning and Tinto's Model: An Empirical Study on University Students

Abstract

This study uses the self-regulated learning and Tinto's model to explain the relationship between academic performance and student satisfaction in a public university in Malaysia. A total of 299 Malaysian undergraduate students were chosen and personally given questionnaires. An important outcome of this study was the existence of a relationship between academic performance and student satisfaction. One interesting finding was that students with a lower cumulative grade point average (CGPA) tend to be more satisfied than those who obtained higher CGPA.

Keywords: *self-regulated learning, Tinto's model, linear regression analysis, public university*

Introduction

Learning is a complex process, one which many students, despite years of schooling, still find mysterious [1]. It is critical to sustained performance by individuals and organizations as they adapt to shifting goals and priorities, necessary competencies, and innovative approaches to numerous, varied pursuits [2]. In relation to performance, its concept may be applied to individuals, groups and institutions, or more generally to any system (social, biological, mechanical), and it concerns the degree to which specific expectations, objectives or goals are attained [3, p. 5]. In the context of higher education, faculty, students, and administrators have speculated about the reason for differences in student academic performance, such as achieve-

ment in prerequisite courses, standardized admissions test scores, age, gender, race, etc. over the years [4]. Universities have a history of attempting to predict the academic performance of applicants in their programs through standardized test scores, performance in previous academic work, and other information required in the application form [5].

As noted by [6], the willingness and ability to learn and adapt throughout one's life is seen as fundamental for improving knowledge, skills and competencies and eventually the key to both academic and professional success [7]. Self-monitoring is considered the critical delineator between successful and less successful students [8]. Self-regulated students are active participants in the learning process. They establish goals, select and apply strategies and self-monitor their effectiveness [9] & [10]. Additionally, as management educators prepare students for success in the rapidly changing work environments, the need for "learning managers" versus "learned managers" has never been greater [11].

Students are cognizant of their academic strengths and weaknesses and believe that opportunities to take on challenging tasks, practice their learning, develop a deep understanding of subject matter and exert effort will give rise to academic success [12]. The primary aim of this study was to examine the association between academic performance and student satisfaction amongst university undergraduate students in Malaysia. Specifically, the perspective of self-regulated learning [9] and Tinto's model [13] were testified based on the findings. Broader implications of this study focus on preparing Malaysian undergraduate students for their academic success. Therefore, it is vital to investigate the associations between students' academic performance and their satisfaction with affiliated educational institutions.

Literature review

A self-regulated learning perspective on student learning and achievement is not distinctive, but it has profound implications for the ways teachers should interact and the manner in which schools should be organized [14, p. 4]. Further, "this perspective shifts the focus of educational analyses from students' learning ability and environments as "fixed" entities to their personally initiated processes and responses designed to improve their ability and their environments for learning." All learners are responsive to some degree during instruction; however, students who display initiative, intrinsic motivation and personal responsibility achieve particular academic success [15]. On the whole, self-regulated learners are purposive and goal oriented (proactive rather than simply reactive), incorporating

and applying a variety of strategic behaviors designed to optimize their academic performance [16].

Reference [17] defined self-regulated learning as learning that results from students' self-generated thoughts and behaviors that are systematically oriented toward the attainment of learning goals. The basic premise of the self-regulated learning perspective concerns students' intrinsic motivation to seek information [18]. According to this perspective, activities that are self-regulated contribute to academic performance, whereas activities that do not reflect self-regulated learning do not contribute to academic performance [19]. According to [19], self-regulated activities include studying and elaborative learning; the latter includes interacting with faculty, participating in organizations, interacting with friends, etc. In other words, self-regulated students can be those who are meta-cognitively, motivationally and behaviorally active participants in their own learning process [20]. References [9] and [14] found that students who were low achievers tend to give several common non-self-regulated responses with greater frequency than students from the advanced track. These findings suggest that lower achievement tracks were not due to their lack of verbal expressiveness but rather to their lack of self-regulatory initiative (p. 8). It signals that students' self-regulating learning behavior is likely to be the main factor in obtaining academic performance and success.

In another context, a model suggested by [13] shows that students enter college with certain background characteristics, interact both socially and academically with the institution, develop a degree of satisfaction with college life, which in turn influences the level of commitment to persist in college [21]. These background characteristics and individual attributes develop educational expectations and commitments, which the individual brings with him or her into university. The central concept of this model is the level of the student's integration into the social and academic systems of the college, which determines persistence or dropout [22, p. 148]. In this manner, the higher the degree of integration of students into the college system, the greater will be the commitment to the specific institution and to the goal of college completion leading to persistence. Overall, Tinto's model may provide a plausible explanation for the effect of academic performance on students' subsequent behaviors in their affiliated educational institutions.

More importantly, our study sample, the undergraduate students who are usually fresh school leavers, may still conform to the traditional academic evaluation in which the norm is to compete and excel academically. At this juncture, academic performance may be a function of student satisfaction. Rather than expecting students' self-regulating learning behavior to be the main factor in obtaining academic success and subsequently satisfying them, it seems students' academic performance

is expected to account for the behavior related to their university satisfaction, As such, it was posited that there would be a significant relationship between academic performance and student satisfaction, stated below:

H1: *There is a significant relationship between academic performance and student satisfaction.*

Methodology

Sample

A total of 299 local students of undergraduate programs were selected from a Malaysian public university engaging a cross-sectional survey. The survey questionnaires were personally administered to the respondents during their lecture hours. Table 1 shows that there were more female students compared to male graduates (73.2% versus 26.8%). The demographic profile also indicates that there is a greater representation of non-married (single) students (96.0%). The students who entered the university with A-level & equivalent were found to constitute the largest percentage of respondents (58.2%), followed by diploma (26.1%), matriculation (13.7%) and other (2.0%) profiles of respondents. As for programs, approximately 37.1% of the students were enrolled in Bachelor of Management (Marketing), followed by Bachelor of Management (Technology) (30.4%), Bachelor of Psychology (Organizational Psychology) (16.7%) and Bachelor of Science (Human Resource Development) (15.7%).

Measurements

The measure for student satisfaction was adapted from [23]'s study with the modifications necessary to reflect local conditions. The instrument comprises three items. The respondents were asked to rate the satisfaction level with the program, institution and services on a 5-point Likert scale (*1="Strongly Disagree" to 5="Strongly Agree"* for first item), (*1="Very Dissatisfied" to 5="Very Satisfied"* for second item), and (*1="Very Bad" to 5="Very Good"* for third item). The scale proved to be uni-dimensional with Cronbach's alpha value of .745, which provided evidence of reliability. Subsequently, the average score was used to aggregate these three items to indicate the level of student satisfaction. As for academic performance, three levels of cumulative grade point average (CGPA): (1) $3.00 > CGPA \geq 2.00$, (2) $3.67 > CGPA \geq 3.00$ and (3) $CGPA \geq 3.67$ were used to conceptualize the students' academic performance.

Statistical Method

To meet the assumption needed to undertake regression analysis, the quantitative variable of this study, namely student satisfaction, must be normally distributed. To achieve this assumption, student satisfaction skewness and kurtosis index cannot be more than 2.5 times the standard error [24]. Regression analysis was used to assess the relationship between academic performance and student satisfaction. The standardized regression coefficients from a multiple regression can provide important additional information to research [25]. Dummy variables were created for CGPA in this study, which were artificial variables introduced to a regression equation to represent CGPA [26]. In this regard, the level of 3.00 CGPA ≥ 2.00 was chosen to serve as the reference category. Since we had three levels of CGPA, two dummy variables were included and the levels of $3.00 >$CGPA≥ 2.00, $3.67 >$CGPA≥ 3.00 and CGPA≥ 3.67 were assigned as 00, 01 and 10 respectively.

Table 1: Frequency of demographic variables

Demographic Variables		Frequency	Percent
Gender	Male	80	26.8
	Female	219	73.2
Marital Status	Single	287	96.3
	Married	10	3.0
	Others	2	0.7
Program	Technology	91	30.5
	Marketing	110	36.9
	Human Resources Development	47	15.8
	Psychology	50	16.8
Entry Qualifications	A Level & Equivalent	174	58.4
	Matriculation	41	13.7
	Diploma	78	26.1
	Others	6	1.8

Statistical Method

To meet the assumption needed to undertake regression analysis, the quantitative variable of this study, student satisfaction, must be normally distributed. To achieve this assumption, student satisfaction skewness and kurtosis index cannot be more than 2.5 times the standard error [24]. Regression analysis was used to assess the relationship between academic performance and student satisfaction.

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Findings

The findings show that the index of skewness and kurtosis for student satisfaction was not more than 2.5 times their standard error. Based on these results, we conclude that student satisfaction fulfilled the assumption of normality. Linear regression analysis was used to assess the direct effect of academic performance on student life satisfaction and the results are summarized in Table 2. The table shows that both dummy variables for levels of CGPA were significantly associated with overall satisfaction. As seen from the coefficient of determination, R^2, these two dummy variables accounted for approximately 4% of the variance in student satisfaction and, both CGPA_D2 ($\beta=-.19, p=.01$) and CGPA_D1 ($\beta=-.16, p=.05$) were significantly associated with student satisfaction. This means that CGPA_D1 and CGPA_D2 exhibit significantly different levels of satisfaction. As for CGPA_D1 and CGPA_D2, the negative βs means that lower numbers for CGPA were associated with higher values for satisfaction. Since 3.00 > CGPA ≥ 2.00 was coded 00, this means that the students with 3.00 > CGPA ≥ 2.00 were more satisfied than those who obtained 3.67 >CGPA≥ 3.00 (01) and CGPA≥ 3.67 (10). Overall, these results provided grounds for full support of hypothesis *H1*.

Table 2: Results of linear regression analysis

	Student Satisfaction	
	Beta (β)	Sig.
CGPA_D1	−.159*	.011
CGPA_D2	−.186**	.003
R^2	.0360	
F-Value	5.532	

Note. ** $p < .01$, *$p < .05$

Discussion & implications

A significant relationship between academic performance and student satisfaction indicates that in some ways it contradicted the self-regulated learning theory proposed by [9], which highlights that self-regulated learners are purposive and goal-oriented (proactive rather than simply reactive), incorporating and applying a variety of strategic behaviors designed to optimize their academic performance [16]. In contrast, the results seem toagree with Tinto's model [13], which claims that whether the student persists or drops out is quite strongly predicted by their degree of academic integration and social integration. On the one hand, academic performance leads to student satisfaction; on the other hand, it could also lead to a narrow vocational orientation and loss of control of the curriculum by academics [27]. Furthermore, the concept of satisfaction could be quite ambiguous for undergraduate students. Unlike postgraduate students who would consider themselves expert customers and had taken numerous courses previously, undergraduate students, whose norm is to compete and excel academically, tend to judge their university experiences based on their academic performance without looking at other aspects of services (tangible or intangible) as a whole. At this juncture, satisfying students by increasing their grades may jeopardize the quality systems of education in Malaysia. In our opinion, rather than approaching student satisfaction strategies, administrators could think of providing courses, such as learning skills, effective presentation or time management courses, on a regular basis to improve their learning outcomes and help them to succeed academically.

Conclusion

This study shows that academic performance does matter in student satisfaction, which indirectly disproves the notion of undergraduate students as self-regulated learners. To a certain extent, the study agrees with Tinto's model, which says that the level of the student's integration into the social and academic systems of the college will determine dropout since student dissatisfaction is usually the main cause of dropping out. As a whole, Tinto's model has provided a plausible explanation for the effect of academic performance on students' subsequent behaviors in their affiliated education institutions.

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Mobile-Learning in Junior High School Education – Opinions and Prospects

Abstract

The article reveals research findings concerning opinions expressed by teachers of Polish junior high schools about the use of mobile phones in education. The findings analysis has been based on given opinions in the field of: the use of mobiles during breaks and lessons, ways of using this medium by teachers and their attitudes to mobile phones use in education. The article closes with conclusions for the purpose of teaching practice.

Key words: *mobile learning, education, junior high school, teacher, mobile (phone).*

Introduction

New developing technologies are being introduced to various areas of human activity increasingly fast. One of such areas is cellular network communication, which currently provides a wide range of its services. This specific process of communication, which assumes the form of synchronous and asynchronous information exchange, is applied in interpersonal contacts as well as in education. Thus, educationalists focus their interests mainly on the latter problem relating to education. The scope of possibilities of using cellular networks for developing one's knowledge, skills and attitudes keeps extending all the time by means of mobile devices which nowadays serve not only to make wireless calls or send short text messages (SMS), images (MMS), but also to perform video chats, search the Internet as well as for entertainment and educational purposes. Therefore,

mobile media facilitate creating key competences, which are a significant element of contemporary European education (Huk T., 2009, p. 58). The activities taken up by mobile phone manufacturers have contributed to an increased interest in mobile devices among teachers who want to realize didactic-educational goals and purposes in a more effective and attractive way. The direction of technical solutions has made mobile phones modified and converted into devices applicable in the learning and teaching processes. This process was called *mobile learning*. J. Traxler suggests defining this term as a way of educating based on handy technologies such as: mobile phones, smartphones, palmtops (PDA), tablets, laptops and their peripherals (Traxler, 2005, p. 262). Let us pay attention to the fact, though, that this definition should be continuously modified as technological development leads to developing yet more modern mobile devices which replace out of date technologies.

Mobile learning (M-learning) allows for science contextualizing which is impossible when using stationary computers (Mobile learning InfoKit, Northumbria University). Mobile telephony facilitates, supports, consolidates and extends the range of teaching and learning, thus raising the level of human knowledge and skills. M-learning "facilitates" because it presents teaching contents by means of multimedia and allows for collecting relevant information in conducive circumstances relating to the context. M-learning "supports" because we can find information about the topic we are interested in at any time. M-learning "consolidates" because during learning we use an attractive medium due to which we can raise the level of our motivation. M-learning "extends" because we can use it within the working range of a mobile site, exploring, analyzing the Internet resources, creating blogs (Huk T., 2007), participating in online communities.

Despite the immense M-learning potential, we should pay attention to its certain limitations. To be more precise, this form does not provide the learner with a concrete field of science as it is not possible to transfer teaching contents of considerable volume by means of mobile devices. A bigger quantity of contents in the form of text does not prove correct (even through a pocket computer) owing to display unit sizes – in spite of the fact that they are bigger and bigger and with much higher definition, reading extensive texts in this way appears to be bothersome. Texting also seems irritating, e.g. creating a blog, where text formatting is considerably limited (Witek, 2009, p. 81). These media provide a source of numerous educational hazards at the same time, the consequences of which may affect the health and mental state of the child (Musioł M., 2007, p. 115).

Profound knowledge and research findings concerning the use of M-learning in education can be found in the literature developed in Western Europe, North

America and Japan. Such an example can be given by a collective monograph, published by Mohamed Ally, which displays research studies concerning the characteristics of mobile learning-based education process (Ally, 2009). Currently there are not many scientific monographs focussed on the use of mobile phones in education in Central-Eastern Europe. Mostly within this scope there are published scientific articles which refer to introducing M-learning at the higher education level.

Purpose, justification of conducted research and research problems

Economically developed countries especially emphasise the development of new technologies supporting the human being in different fields of his or her activity. Education is one of such fields, in which new media are used and research is conducted into the media influence on the accomplishment of the didactic-educational process. Due to the fact that the communities of Eastern-Central European countries (including Poland) are delayed in using these technologies, studies in this regard are often postponed. Therefore, one should concentrate their research activities on the diagnosis of Polish education within the range of preparing for a didactic process which involves the use of mobile learning opportunities. In the first place, one should characterize school environment and the attitude of its members to the implementation of mobile devices in the education process. Each of the education system stages should be subject to the diagnosis. The studies revealed in this article concern the level of junior high schools attended by teenagers aged 13-16. The purpose of these studies was describing situations referring to the use of mobile phones in junior high schools and the characteristics of teachers' attitudes to this medium.

On the basis of the above-mentioned purpose the following research problems were defined:

- Do students of the teachers involved in the study use mobile phones during breaks and lessons?
- How and for what purposes is a mobile phone used by junior high school teachers?
- What is the attitude of junior high school teachers to this medium?

Research method

The main research method used for the purpose of these studies was a diagnostic poll within which a questionnaire was used to be filled in by junior high school teachers and covert non-participant observation was applied for junior high school students during breaks at school (Palka S., 2006, p. 57).

The most important information to be analyzed was gathered during the poll addressed to junior high school teachers. The questionnaire was filled in by 77 teachers from the following four Polish provinces: Silesian, Lower Poland, Opole and Łódź Province. The observation was conducted for one month in a junior high school during breaks. The poll questionnaire consisted of 12 questions including 9 closed-ended and 3 half-opened ones. The observation was held with the use of an observation form.

Research findings

Popularity of mobile phones leads to the situation where they are used by students also during the time spent at school, which can be proved by observations held by teachers, who look at their students through the prism of their activities during lessons and breaks. Observations performed by the junior high school teachers reveal that 92% of the students use mobile phones during breaks whereas 8% of the teachers claim mobile phones are not used by the students during breaks in their schools (Graph 1).

Graph 1. Using mobile phones by students during breaks at school, N=77
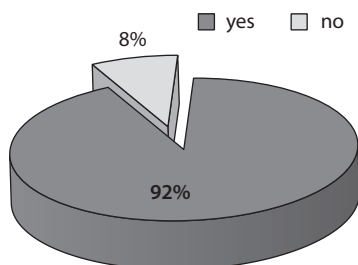
Graph 2. Using mobile phones by students during a lesson at school, N=77
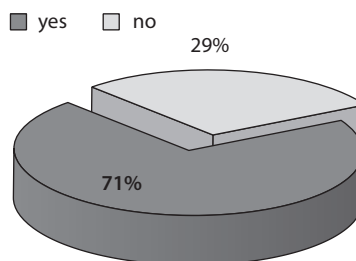
In school reality we can observe sitting students during breaks as they use mobiles to make calls, send text messages, play games, take photos, record films or search the web. Students compare the mobile models they have, display their technical possibilities. All these activities contribute to this item having a potential influence on the character of social relations occurring in the classroom. A student with a worse mobile can be sometimes rejected.

Sometimes students use mobile phones during a lesson. The conducted poll revealed that such a situation was confirmed by 29% of the teachers (Graph 2). This situation is not usually accepted by teachers because its reasons may relate to: the intention of using a mobile to get an answer to tasks from a test, to exchange information with other students about issues regarding some lesson tasks or inter-personal relations, a desire to illegally record, film a lesson or to take photos. Thus, new technologies are more and more often used by students for dishonest conduct at school. 18% of the teachers involved in the study confirm this fact with catching their students "cheating" with the use of their mobiles during a test.

Young users of mobile phones try to use them during a lesson in such a way that they will not be noticed by the teacher. Thus, the figures displayed in Graph 2 regard only the situations recorded by the respondents. Therefore, additional studies need to be conducted to reveal the number of students using mobiles during lessons unnoticed by the teacher. From the teacher's perspective the situations mentioned above have a pejorative meaning. There are some circumstances, though, in which a mobile phone is used by students during a lesson with the teacher's consent – they most often concern a sudden and important call made between a student and his or her parents or with the intentional consent of the teacher to use mobile phones to realize program contents of a given subject.

As far as using mobiles by students in Polish schools is concerned, since they became widespread and widely available among teenagers, they have been negatively perceived by teachers, so school establishments included a clause in their statutes, regulations concerning a ban on the use of mobile phones at school. These regulations are usually included in several paragraphs regarding an entire ban on the use of mobile phones. There are some schools, though, which apply more liberal law in this respect. This law concerns the possibility of using a mobile phone by a student only during a break for urgent matters. A mobile phone must not be used for taking photos, filming, recording sound without the teacher's consent, and if a student fails to comply with these rules, the tutor is entitled to prohibit the student from bringing the mobile to school at all. There are also some schools where the school provision on using mobile phones by students allows the possibility of using this medium to meet didactic and educational purposes by the teacher's consent.

Teachers' negative attitude to the use of this medium can be proved by the respondents' opinions, 99% of which confirm the existence of a provision concerning a ban on the use of mobile phones within school premises. Let us not forget that these regulations as well as school statutes are approved by the board of teachers.

A provision about an entire ban on the use of mobile phones within junior high school premises does not usually consider the use of this medium to realise the teaching program, which proves teachers' little knowledge in terms of methodology in the field of educational possibilities of this device as well.

The comparison of the obtained results of the conducted poll in the field of: the number of school regulations with a provision about a ban on the use of mobile phones within school premises (99%), the number of students using mobiles during breaks (92%), lessons (29%) and tests (18%), provides us with information about common breaking of school law by students. That is why we can state that 97% of the schools where the teachers involved in the study work, have "dead regulations" which are not respected at all. A solution to this situation may be the implementation of some modifications to school law in the field of the possibilities of using this medium for didactic purposes with the teacher's consent.

However, it is worth paying attention to the fact that the binding school law concerning using mobiles within school premises is broken not only by students but by teachers themselves as well. The findings reveal that 34% of the responding teachers admitted using a mobile phone during a lesson. This situation does not have a positive effect on the teachers' image, who pass some regulations that they do not comply with, breaking them during a lesson in the presence of their students. Such a behaviour may lead to distorting the teacher's authority. Then more students ask uncomfortable questions: *Why can you make a phone call during a lesson and I can't?* A teacher who finds himself or herself in such a situation very often cannot admit his or her guilt, looks for an excuse, which makes his or her image even worse in the eyes of the students who are on the way of physical and mental changes during adolescence. We should remember that this period is the time of searching for authorities as well as teenage angst for the student aged 13 – 16.

The above-described situation, in which teachers use mobile phones during a lesson, also proves a great attachment of one third of the teachers to their mobiles. In order to prove this hypothesis, the teachers involved in the study were asked the following question: *Do you feel discomfort when you realize you had forgotten your mobile phone after leaving home?* The teachers' responses reveal that 61% of them do feel such a discomfort indeed. Therefore, this index proves the teachers' attachment to this medium. This may be confusing for the teacher whose mind

should be focussed on teaching rather than feeling uncomfortable due to the lack of his or her mobile.

The most essential advantage of mobile phones is the possibility of contact with another person in any place where the range of a given network is accessible. This feature is used by teachers when contacting students and their parents in relation with some didactic and educational matters. The conducted studies revealed that teachers communicate educational issues more often with parents than students (Table 1).

Table 1. Contacts of teachers with students and their
parents by means of a mobile phone

Teachers communicating educational matters to students by means of a mobile, expressed in %. N=77%	Teachers communicating educational matters to parents by means of a mobile, expressed in %. N=77
61%	92%

The figures presented in Table 1 suggest that over 92% of the teachers use mobile phones for communication with parents. These days it is a natural activity because different situations which take place at school demand immediate contact.

The mobility of a mobile phone enables direct conversation with a parent instantly after an event. In Polish schools contacts between teachers and parents concern the behaviour of a student during the time spent at school, their educational achievements, issues relating to providing first aid to a student and some organizational matters. Much less often teachers contact their students by a mobile – 61% of teachers. Probably this is connected with parents' responsibility for their children that they bear at this educational stage. As the responses provided by the teachers reveal, 49% of them do not want students to get their mobile phone numbers. Nevertheless, the results show that there is a considerable number of teachers who contact students under their care by mobiles.

The purposes for which teachers may use mobile phones may determine the way of using this medium in the educational process. These activities comprise an inspiration as a result of which the program realized during lessons can be more attractive to students. In order to determine the ways and purposes of using a mobile phone by teachers, the respondents were asked a closed-ended question with a definite cafeteria, which consisted in numbering an activity performed by means of this medium from 1 to 10, where number 1 marks the most frequently conducted activity whereas number 10 the least frequent one.

Table 2. The purpose of using a mobile phone from 1 to 10. 1 – means
the most frequently performed activity by means of a mobile.

THE MOST COMMON ACTIVITY PERFORMED WITH THE USE OF A MOBILE PHONE	
Activity	Ranking
To talk	1
To send sms, mms	2
As an alarm	3
To check the time	4
To take pictures, record films	5
To use a calculator	6
To exchange files	7
To listen to music, radio	8
To record sound tracks	9
To play games	10

The findings shown in Table 2 reveal that the teachers most often use a mobile phone to talk – first place in the ranking. Sending sms took the second place, whereas using a mobile as an alarm was third, checking the time was fourth, taking photo and recording films came as fifth. The choices made by the teachers prove that the functionality of mobile phones has significantly increased. This device is not used only for communication purposes, but also for a watch, digital camera or digital video camera purposes. Other choices were made in the respective order: mobiles used for making calculations on the sixth place, exchanging files on the seventh place, listening to music and radio on the eighth one whereas recording sound tracks on the ninth place and finally playing games on the tenth place. It should be mentioned that 72% of the junior high school teachers chose all the ten categories, which proves a good knowledge of mobile phone functions. We can assume then that these teachers are aware of the high functionality of mobile devices and this is the first step towards using this device in education.

Conclusions

The research conducted in a group of 77 Polish junior high school teachers enabled to provide answers to the posed research problems. The first issue concerned the use of mobile phones by junior high school students during breaks and lessons. The analysis of the findings regarding the conducted research indicates that a vast

majority of the students use this medium during breaks, they also happen to use this device during lessons, cheating during a test. Another issue concerned the way and purposes of using mobile phones by teachers. The analysis of the research findings in this regard reveals that over a third of the teachers involved in the study use mobiles during lessons. Therefore, both the students and teachers break the school law which forbids using mobile phones within school premises in a vast majority of the schools involved in the study. We can claim that the regulation concerning "the ban" on the use of mobile phones is not observed, it is becoming "a dead regulation". Nearly one hundred per cent of the teachers involved in the study use a mobile phone to communicate with parents, whereas more than a half of them contact students about educational matters. It should be mentioned at this point that these calls are conducted at the teacher's cost, not the school's. The way of using this medium does not differ from its main functions, which facilitate phone calls or sms/mms communication. One should mention, though, that more than a half of the respondents use this device as a watch, calculator, camera, video camera or mini video game console. A solution to the last research problem concerning teachers' attitude to mobile phones indicates their great attachment to this medium. The conducted studies make one draw the following theoretical and practical conclusions: – to implement the contents concerning the right use of a mobile phone in the junior high school teaching program; – to provide financial support to the teachers who contact parents and students about educational matters by mobile phone; – to change the school law in the scope of using mobiles within junior high school premises; – to perform M-learning workshops for junior high school teachers and design and check a theoretical basis for the junior high school teaching system which is to be based on the use of mobile phones. The accomplishment of the above-specified conclusions will comprise the basis for the introduction of mobile learning to Polish junior high schools.

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Assessment of LMX as Mediator in Procedural Justice – Organizational Citizenship Behavior Relationship

Abstract

Scant literature is available on procedural justice – organizational citizenship behaviour (OCB) via mediating role of leader-member exchange (LMX) in higher education context especially in Asian countries like Pakistan. For this purpose, data was collected from 452 permanent and contractual teaching faculty serving in different positions at private and public sector degree awarding institutes / universities accredited by the Higher Education Commission (HEC) of Pakistan. Mediated regression analysis, as proposed by Baron and Kenny (1986), was employed to address the research hypothesis. Results showed that LMX fully mediates the relationship of procedural justice OCB. Implications for future researchers and academic administrators are presented.

Keywords: *faculty, higher education, LMX, OCB, Pakistan, procedural justice, universities*

Introduction

Li and Cropanzano (2009) claimed that employees' perceptions regarding the fairness or justice have been extensively studied under organizational justice's heading. Organizational justice is considered as an important aspect regarding the decisions and processes in HR system (Thurston and McNall 2010) for employees and managers as well because it has special forces which can act as binding force between the conflicting parties and establish a social and stable structure (Konovsky 2000). Colquitt et al. (2001) conducted a meta-analysis on 183 research

studies published during 1975–1999 and showed that justice perceptions have an impact on numerous organizational outcomes such as organizational commitment, withdrawal OCB, performance and job satisfaction. Cohen-Charash and Spector (2001) also corroborated, in their meta-analysis on 190 research publications, Colquitt et al. (2001) results also reported the positive relationship of justice with trust and negative association with counterproductive work behaviour.

Organizational justice defined by Greenberg (1990) as "…attempts to describe and explain the role of fairness as a consideration in the workplace…". Justice is related with the means to distribute benefits fairly and the process of evaluating what benefits are to be received (Johnson et al. 2008). Organizational justice or fairness in the workplace applied in organizations includes employee development (McDowall and Fletcher 2004), OCB (Moorman and Byrne 2005) turnover intentions (DeConinck and Bachmann 2005), stress (Judge and Colquitt 2004), team effectiveness (Sinclair 2003), perceived organizational support and pay rise decisions (Kickul, Gundry, and Posig 2005). Apart from these researchers, limited studies are available on the influence of organizational justice (procedural justice) on OCB in the presence of mediating role LMX in higher education scenario. So, the basic aim of this research is to test the mediation mechanism between the relationship of procedural justice and OCB among teaching faculty of higher education institutions / universities of Pakistan.

Literature Review

Organizational justice is defined as the employees' perception towards the dealing by the organizations honest and fair (Elovainio et al. 2005). Numerous studies used organizational justice with its other three dimensions in organizational research as explanatory variables (e.g., Lam, Schaubroeck, and Aryee 2002). Researchers (Ambrose et al. 2005) also suggested that the paradigm shifting concerning overall fairness may give a comprehensive understanding of the role of justice in organizational settings.

Hoy and Tarter (2004) summarized the organizational justice principles as *equality principle*, *perception principle*, *polyphony principle*, *interpersonal justice principle*, *consistency principle*, *social and political equality principle*, and *correction principles*. Generally, organizational justice categorized in three broad dimensions e.g. distributive, procedural and interactional justice is (Martinez-tur et al. 2006). Despite the number of typologies concerning organizational justice, this study only focuses on procedural justice. Procedural justice introduced by (Thibaut and

Walker (1975) during their research on dispute resolution procedures. Procedural justice is defined as the employees' opinion about fairness the in decision making process for final outcome of the task (Greenberg 2004). Moorman (1991) defined it as the equality procedures which evaluate the employee performance fairly.

Researchers (e.g., Schriesheim and Stogdill 1975) challenged the current existence of leadership styles. These researchers indicated that the leader led their subordinate and / or followers in different ways rather than with a similar leadership style for all of them (Graen and Schiemann 1978). In educational settings, teacher leadership is described as a leadership model in which the teaching faculty working in an organization have the opportunity to lead (Harris and Lambert 2003) but it seems that leadership in educational settings is somewhat confusing due to a multitude of models and theories (Grant et al. 2012). OCB was defined by Begum (2005) as employee behavior which he or she exerts more than their call of duty while performing the job. OCB mainly concentrates on the characteristics of an individual's cooperative behaviour in the organization and explains why people show more corporate behaviours than their peers/subordinates. OCB mainly concentrate on the characteristics of an individual's cooperative behaviour in the organization and explain why people show more corporate behaviours than their peers/subordinates. After 20 years, Organ, Podsakoff, and MacKenzie (2006) emphasized building the conceptualization of OCB.

Colquitt (2001) claimed that organizational justice and its sub-dimensions are empirically and theoretically different from each other. Hence, it is possible that these three different justice types have different consequences (Ambrose and Schminke 2003). Cropanzano, Prehar, and Chen (2002) argued that the two main types of organizational justice: procedural justice and distributive justice have significant exchange relationship with an organization or an individual because these justice types can be considered as structural or system variables. The empirical research of Alexander and Ruderman (1987) and Tansky (1993) on justice and LMX proved the significant and positive association among these variables. However, recent studies generate more comprehensive results among these two variables by using rigorous analyzing techniques. Nevertheless, there is still lacuna exist in the literature pertaining to justice and LMX at a group level or individual level or integrated model (Colquitt and Greenberg 2003).

Numerous researchers also proved that LMX is serving as a bridge which connects the justice perception with the importance of work related behaviors (Cropanzano, Prehar, and Chen 2002). Empirical research endorsed the relationship of LMX with OCB (Lapierre and Hackett 2007). It is widely believed that OCB contributes to the effectiveness and efficiency of a functional organization (Organ,

Podsakoff, and MacKenzie 2006). Like LMX, OCB is predominantly based on the social exchange theory (Van Dyne, Graham, and Dienesch 1994). The discretionary OCB provides an avenue for subordinates in high-quality LMX relationships to return the benefits offered from the leaders (Settoon, Bennett, and Liden 1996). This belief was supported by the meta-analytic mean correlation of 0.32 between LMX and overall OCB (Lapierre and Hackett 2007).

Study Hypothesis: LMX mediates the relationship of procedural justice and OCB in faculty members of higher education institutions / universities.

Research Methodology

Survey-based study design was employed to test the hypothesis. Data was collected from the faculty members having permanent or full-time contract positions in private and public sector higher institutes accredited by the HEC Pakistan. After taking permission from the higher management of concerned universities and institutes, 750 questionnaires were distributed personally during March – July, 2011. After multiple follow-ups, 452 statistically usable questionnaires were collected. Procedural justice was measured on the scale presented by Niehoff and Moorman (1993), LMX was determined on a seven items scale proposed by Graen, Liden, and Hoel (1982) while overall OCB was assessed on a nine items scale suggested by Lee and Allen (2002). Factor analyses and mediated regression analysis (as proposed by Baron and Kenny 1986) were used to test the mediating relationship LMX between the dimensions of procedural justice and OCB.

Analyses and Interpretations

The demographic profile of the respondents participating in this study are presented hereunder.

- Majority of the respondents were male (73%).
- 58% of the faculty members were married whereas 42% were unmarried.
- 71% of the respondents were below 30 years of age and 39% were over 30.
- 184 faculty members had MS / M. Phil / PhD and Post PhD degrees.
- 74% of the faculty members were serving on Lecturer designations in private and public sector universities and institutions.
- Only 37% of the faculty members were serving in private sector institutions whereas 63% of the respondents were from private sector institutions.

- 82% of the faculty members had less than 5 year teaching experience.

Table 2 provides the descriptive statistics including the mean, standard deviation, reliability and factor loading of each item related to study variables.

Table 2 Descriptive Statistics

	FL Range	KMO	Mean	Std. Deviation	Reliability Co-efficient
Procedural Justice	*0.45–0.80*	0.68	3.29	0.64	0.70
LMX	*0.55–0.73*	0.78	3.50	0.60	0.74
OCB	*0.38–0.70*	0.77	3.80	0.53	0.77

FL Range = Factor Loading and KMO = Kaiser-Meyer-Olkin Measure of Sampling Adequacy

Table 3 shows the regression analyses of the independent variable (procedural justice – PJ) and mediating variable (LMX) on dependent variable (OCB). PJ explained 11% variance in OCB with F-statistics (55.33*, *p<0.001) which is adequate for explaining the variance in predictive model. The standardized beta coefficient for PJ was (b = 0.33, t = 7.44*, *p<0.001) which proved the positive relationship between PJ and OCB. The second regression analysis described the impact of LMX on OCB with 24% variance in the model with beta coefficient (b = 0.48, t = 11.74*, *p<0.001) which also shows the positive relationship of LMX and OCB.

Table 3. Regression Analyses for PJ and LMX on OCB

Independent Variable	Dependent Variable OCB			
	R Square	*F- Statistics (ANOVA)*	*Beta Coefficient*	*t-Statistics*
Procedural Justice (PJ)	0.11	55.33*	0.33	7.44*
LMX	0.24	137.92*	0.48	11.74*

Significant at 0.001 Level

Table 4 explained the Baron and Kenny (1986) mediation regression analyses which are used to determine whether or not LMX played a mediating role among PJ and OCB. In the first step, LMX as hypothetical mediator was regressed on PJ. PJ explained 4 percent variance in the model (b = 0.63, t = 17.13*, *p<0.001) in LMX. In the second step, PJ explained 11% variance in OCB (b = 0.33, t = 7.44*,*p<0.001). At the final stage (step 3), dependent variable (OCB) was regressed on PJ and LMX.

Both the variables showed 24% variance together in OCB with F-statistics (69.26*, *p<0.001). The beta coefficient of PJ is (b = 0.04, t = 0.83 non-significant) and LMX is (b = 0.46, t = 8. 61*,*p<0.001). Therefore, according to Baron and Kenny (1986) when the impact of initial or independent variable on dependent variable drops off to a statistically non-significant level after neglecting the influence of mediating variable then full mediation is endorsed as observed in the sample of faculty members serving in public and private universities accredited by HEC. Hence LMX was found to fully mediate PJ-OCB relationship.

Table 4. Mediated Regression Analyses

		LMX				OCB			
		R Change	*ANOVA*	*β*	*t*	*R Change*	*ANOVA*	*β*	*t*
Step 1	PJ	0.39	293.26*	0.63	17.13	—	—	—	—
Step 2	PJ	—	—	—	—	0.11	55.33*	0.33	7.44*
Step 3	PJ LMX	—	—	—	—	0.24	69.26*	0.04	0.83**
								0.46	8.61*
Sobel Test (*z*)		2.34*							

*Significant at 0.001 Level   **Not – Significant at 0.1 Level

Conclusion and Recommendations

The study findings revealed that LMX acts as full mediator in the relationship of organizational justice and OCB among the teaching faculty employed by public and private sector institutes of HEC. LMX theory is grounded in social exchange where there is an "obligation at subordinate ends to create and provide strengths to the relationship with the leader" (Graen and Scandura 1987). The association of procedural justice and extra-role behaviours (OCB) is extensively available in the literature, and also provides a relatively robust relationship (Hofmann, Morgeson, and Gerras 2003). While taking OCBs as ethical actions which munificently go beyond the moral minimums, researchers suggested that fairness in procedures extract moral judgments that is why procedural justice escorts the employees to go beyond the duties or to perform OCB. Ambrose (2002) claimed that literature about the fairness perceptions is evolving and growing because researchers are heavily conducting empirical research on justice perceptions is multiple outcomes. This study specifically addresses an important notion "why justice matters" for the administration working in the higher education sector.

In spite of thoughtful findings in the higher education domain, this study also has some limitations. Firstly, there is a common method variance because data was taken from the same source. This study is cross-sectional in nature and causality can be only assumed but not generalized. For future studies, it is advisable to add new variables to the model, like job satisfaction, intrinsic motivation, organizational commitment and in-role performance, etc. This study also contributes to policy makers of private and public sector higher education institutions. Numerous researchers highlighted the importance of OCB according to employees' perspective (Tepper and Taylor 2003). The top management should encourage employees to participate in OCB by providing collective and effective functionally by appreciation and demonstration because anchez and Levine (2009) claimed that "practical considerations may involve the use of competency modeling practices to incorporate OCB, signal the importance of this type of behavior, and encourage maximum performance".

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The Effect of Project-Based Learning on Teaching of Polygon and Plane Geometry Unit

Abstract

Project-Based Learning (PBL) is a student-driven, teacher-facilitated approach to learning. PBL provides opportunities for students to pursue their own interests and questions, make decisions about how to find answers, and solve problems. This study, carried out to determine the effects of Project-Based Learning Approach in teaching of "Polygons and Plane Geometry" unit on 9th grade students' achievements, attitudes and views about the implementation, was designed in a pre-post test experimental model with a single experimental group. 32 9th grade students were chosen as the sample of this study. It was concluded that there was a significant difference between pre-post tests of students' achievements and attitudes.

Keywords: *project-based learning, mathematics teaching, polygon and plane geometry.*

Introduction

The significance of information has been increasing very quickly in recent years, and the concepts of "information" and "science" have also changed accordingly. Technology has also been improving, and similarly, the concepts of democracy and management have been undergoing change. The expectations of societies from their individuals are also changing so that they could keep pace of the experienced changes mentioned above. As in all the fields, there is always a necessity for education to change. In the Math Curriculums implemented in our country, it is pointed out that individuals can use math in their real lives, can share their

solutions and thoughts with others, can work in groups, can have self-confidence related to math and can develop positive attitudes towards math lessons. There is a strong necessity for diverse approaches different from traditional ones to be able to achieve these goals in education systems. Project-Based Learning (PBL) is one of these contamporary approaches.

In literature, there are diverse definitions for PBL. Buck Institute for Education (http://www.bie.org) defines PBL as an innovative approach which focuses on general concepts, thoughts and disciplines as well as establishing the grounds on which learners can cooperate to find solutions to the problems which they can encounter in their lives. The most basic characteristic of this approach is that this approach establishes a problem/scenario ground interrelated with other disciplines, and thus a learner centered approach is taken to the forefront and learning within small groups is facilitated. Students prefer the following class scenarios: thinking, problem solution, creativity, access to information, processing information, reblending the learned information, questioning the generated information and compromising on the newly learned information, and also they save the time of both individual and group work (Gültekin, 2007; Waters & Ginns, 2000). In this approach, teachers function as assisting and leading persons, and students are autonomous as well as being editors (Atıcı & Polat, 2010; Eskrootchi & Oskrochi, 2010). At the end of each scenario, a realistic product, which has been developed by students, emerges. PBL consists of three basic concepts which have been chosen very carefully to demonstrate what education systems should be like nowadays. One of these concepts is learning, which is considered to be very significant as it aims to focus on learners rather than teachers. Another one is the concept of project, design work and developing new designs, imagining and planning. This concept refers to preparing the learning project; in other words, it means guiding the learning process. It mostly fosuses on relational learning for a specific purpose rather than individual learning. It handles a project as infrastructure rather than a target, and PBL emphasizes that learning is a process rather than a product, and thus it makes it unique to learners depending on how much time learning takes (Erdem & Akkoyunlu, 2002).

PBL is an innovative and empirically proven instructional strategy that involves students in learning and encourages deep understanding. Based on decades of research into cognitive psychology (e.g, Bransford, Brown & Cocking, 1999), PBL has been shown to be especially effective with unmotivated, low achieving students. Recent interest has developed from the recognition that students are not being prepared for productive lives in the workforce and society by traditional instruction (e.g., as noted by the Partnership for the 21st Century Skills, 2008).

Effectively designing and implementing projects can help teachers deliver high quality assignments as called for by American Institutes for Research and SRI International (2005), giving students authentic tasks framed by rigor, relevance and relationships, and promoting student well-being and hope (Newell & Van Ryzin, 2007). PBL offers a wide range of benefits to both students and teachers. A growing body of academic research supports the use of project-based learning in school to engage students, cut absenteeism, boost cooperative learning skills, and improve academic performance (George Lucas Educational Foundation, 2001). For students, the benefits of PBL include:

- Increased attendance, growth in self-reliance, and improved attitudes toward learning (Thomas, 2000),
- Academic gains equal to or better than those generated by other models, with students involved in projects taking greater responsibility for their own learning than during more traditional classroom activities (Boaler, 1999; SRI, 2000),
- Opportunities to develop complex skills, such as higher-order thinking, problem-solving, collaborating, and communicating (SRI, 2000),
- Access to a broader range of learning opportunities in the classroom, providing a strategy for engaging culturally diverse learners (Railsback, 2002).

For teachers, additional benefits include enhanced professionalism and collaboration among colleagues, and opportunities to build relationships with students (Thomas, 2000). Additionally, many teachers are pleased to find a model that accommodates diverse learners by introducing a wider range of learning opportunities into the classroom. Teachers find that students who benefit the most from project-based learning tend to be those for whom traditional instruction methods and approaches are not effective (SRI, 2000).

The literature review suggests that the ways which could be followed in PBL can be generated in many different ways. However, the method used in this study is the one suggested by Erdem and Akkoyunlu and collected in a 10-item-list in detail. They are: determining the objectives, defining the task to be fullfilled and the work to be done, forming groups, determining the characteristics of a final report and deciding on how to present it, preparing a working schedule, determining the control points, determining the criteria to be used in assessment and the proficiency level, gathering information, defragmenting the obtained information and preparing a final report, presenting the project.

The Project-Based Learning Approach uses a process in which the product and process are handled together, which is called a basic assessment system. The assessment activities are related to whether students have understood subjects and

developed and documented real life-related experiences which students need out of class. This assessment system is operative from the beginning of the study to the end. With this regard, it handles the product and process together as a whole. Besides, as suggested in the math curriculum implemented in the 9-12th grades in our country, it is emphasized that the following issues are to be taken into consideration when evaluating the curriculum: to what extent students can use math in their daily lives, to what extent they have improved their problem solution skills, how much their implication skills have improved, what their attitudes are towards math, how much self-confidence they have in math, how much their social skills have improved, to what extent they can build communication with math and if they can make mathematical associations. Considering this, we can suggest that this study was carried out to implement Project-Based Learning, which is being used in private education institutions, in vocational schools where math is considered to be very boring, unnecessary and difficult to cope with.

Research Question

What is the effect of using the Project-Based Learning Approach in the teaching of "Polygon and plane geometry" unit on 9th grade students' achievements and attitudes, and what are students' opinions about the implementation of this approach?

Sub-questions
1. Are there any significant differences between the pre- and post-test scores of the 9th grade students who were treated with the Project-Based Learning Approach in the teaching of "Polygon and Plane Geometry" units and what are the opinions of the students?
2. Are there any significant differences between the pre- and post-test attitude scores of the 9th grade students towards math, who were treated with the Project-Based Learning Approach in the teaching of "Polygon and Plane Geometry" units and what are the opinions of the students?

Research Model
This study, which was carried out to determine the effects of the Project-Based Learning Approach in the teaching of "Polygon and Plane Geometry" units on 9th grade students' achievements, attitudes and views about the implementation, was designed in a pre-post test experimental model with a single experimental group. This type of research model aims to determine the effects of a new technique or

approach on an experimental group. As this study aimed to evaluate the implementation of the PBL approach, this model was used in this study. In this study, both qualitative and quantitative data was handled together.

Research Sampling

32 9th grade students from a vocational school in Balıkesir town center in 2010-2011 school year were chosen as the sample of this study. These students were divided into 6 groups, two of which consisted of 6 people and four of which consisted of 5 people, and this division was made as a consequence of the data gathered from the teachers teaching these students, considering the achievement levels of the students, their fields of interest, their gender and dexterity. The guidance files of the sample students were also examined to gather data about them.

Data Collection Tools

The pre/post-tests, which were prepared to determine the achievement scores of the students treated with the Project-Based Learning Approach in the teaching of the 9th grade Geometry lesson, "Polygon and Plane Geometry" unit, were developed from the Secondary Education Geometry Lesson (9th and 10th grade) Curriculum by the researcher. All the gains were divided into two scoring them out of 5, except one within the chosen curriculum. To test whether the prepared questions measured the generated gains, 5 field experts were requested to submit their views related to the questions. They were requested to rate the questions out of five. Considering the views gathered from the field experts, 27 questions were obtained appropriate to 5 gains mentioned above. The final questions were administered to 67 students to test their validity and reliability, and the scores of the 6 items whose total item corelation obtained from reliability analysis was below .30 were excluded from the study. The final results and the ratings taken from the field experts were compared and then a 9-item test was prepared as a final version. The Math Attitude Scale developed by Baykul (1990) was used in the study to reveal the students' attitudes towards math lessons.

Besides, the participants were also requested to submit their views related to the implementation to be able to come up with an explanation for the obtained quantitative data. Therefore, a new form adapted from the 9th-12th grades Math Curriculum was used as interview forms.

Data Collection Procedure

Under this title, the procedure followed in data collection to come up with answers to the sub-research questions was reported:

1. The 9th grade curriculum which is in use currently was examined to be able to start experimental studies, and it was decided together with the branch teachers that the gains presented in the geometry, biology and geography lesson curricula and stated below can be taught with the use of the PBL approach. The chosen gains are presented below:

Lessons	Gains
9th grade geometry lesson "Polygon and Plane Geometry" units	**1.** Teaches polygons, calculates the internal and external angles. **2.** New applications and correlations are made related to the perimeter of polygons and it perform, related polygonal implementations. **3.** Explains the parity theorem and performs implementations. **4.** Explains the conversions on planes and carries out platings with polygons. **5.** Explains the similarity theorem in triangles and carries out implementations.
9th grade biology lesson "Classification of the Creatures and Biological Diversity"	**1. In relation to the classification of creatures, students:** 1.1. Realize the diversity of creatures with the help of their observations in their near surroundings. 1.2. Explain the significance of the scientific classification of creatures. 1.3. Illustrate the necessity for binomialism of organisms. 1.4. Set the criteria for the classification of creatures. 1.5. Investigate and realize that the major categories used in the classification of creatures reflect a hierarchy. **2. In relation to classified habitats and their characteristics, students:** 2.1. State that creatures are classified under 6 groups as ark bacteria, bacteria, protists, mushrooms, plants and animals. 2.2. With the help of a simple clue, can identify organisms.
9th grade geography lesson **"Natural Systems"** units	A.9.1. With the help of the effect of natural elements, they can give meaning to the relationship between nature and humans. A.9.2. With the help of 4 major habitats consisting of nature, they can identify the place of natural systems among geography subjects.

2. The researcher decided on the scenario to be given to the participants following the interviews conducted with the teachers and the school principal. This scenario is based on establishing an outdoor place in the school yard for students to rest during breaks.

3. The experimental curriculum, which was prepared under the light of PBL principles, was submitted to the teachers teaching math, conducting curriculum development, and they were requested to submit their critique. Considering the views submitted by them, the curriculum draft was finalized.

4. The pre-post tests and the interview forms used in this study were piloted and their final versions obtained.
5. Before starting the experimental studies, the pre-test and the math attitude scale were administered to the experimental group, keeping this out of the experimental process
6. The experiment started and the implementation, which had been planned to last for three weeks, took 4 weeks as the teachers and the participants were new to the approach.
7. Following the experimental implementation, the post-test and the attitude scale towards math and the interview form were administered to the participants.
8. The data obtained from this study, which was designed as an experimental study, was analysed, discussed and a final report was prepared considering the sub-questions of this study.

Findings

The pre-test and post-test scores of the participants were compared to find with an answer to the first sub-question of this study and the obtained results are presented in Table 1.

Table 1. Comparison of the Pre-test and post-test scores of the students treated with the PBL Approach.

Group	N	Test	Mean	Score	Mean difference	Sd	t	p
Experimental	32	Pre	30.56	18.55	37.68	31	2.095	0.04
		post	68.24	24.30				

*Note. *p< .05*

Table 1 shows that the arithmetic means of the post-test scores of the participants in the experimental group are higher than those of the pre-test scores by 37.68. The t-test, which was carried out on the sample group to see if this difference was significant, showed that t=2.095 and p=.04(<.05). Therefore, it appears that there is a significant difference between the post-test score of the participants in the experimental group and that of the pre-test, in favour of the post-test. These results reveal that the math classes in which the Project-Based Learning Approach was implemented were found to have more achievement. These results are similar

to those of Coşkun (2004), Gültekin (2005), Özdener and Özçoban (2004), Uzun (2007), Memişoğlu (2008), and Uyangör and Övez (2008). All the related studies demonstrated that the Project-Based Learning Approach was found to be more effective in triggering students' academic achievements compared to traditional teaching methods. The findings of this study are parallel with those of many studies carried out by diverse researchers. It can be suggested that the Project-Based Learning Approach is effective in increasing students' academic achievements.

The data obtained in the interviews conducted to find out reasons why students' academic achievements had increased revealed that the participants were aware what they had done during the implementation process. The data obtained from the interviews also revealed that the participants could see the fields in which math is used, and also they could relate it to various lessons; therefore, they considered math to be very beneficial. Thus, they suggested that what they had learned was better remembered. With this regard, S18 said that "it was good for us to be aware of what we were doing at every stage of the implementation", S5 said that "math was limited within the class, but with the help of this implementation we learned how useful math could be very in our lives". Some of the participants said that group work increased their motivation. Although the participants had difficulty in individual learning, they stated that they learned better when they were with their friends in groups. S1 said: "I think it would be more difficult to learn this subject, but it was easier for me to learn with the help of my friends". However, two of the participants said that they were not good at group work and during that implementation they got bored. S21 said that "it could have been better if the teacher had instructed us and we had only listened as we used to do in the past. I do not like group work, especially keeping in touch with one another out of class is really difficult. However, we completed the study".

The scores of the participants which they got in the attitude scale were compared to give an answer to the second sub-question of this study and the obtained results are presented in Table 2.

Table 2. Comparison of the pre/post test attitude scores of the participants treated with the PBL Approach.

Group	N	Test	Mean	Score	Mean difference	Sd	t	p
Experimental	32	Pre	105.12	19.56	12.13	31	2.068	.041
		post	117.25	24.36				

*Note. *p<.05*

Table 2 shows that the arithmetic means of the scores that the experimental group got in the attitude scale were higher than those of the posttest by 12.13 points. The t-test which was carried out to test if this difference was significant showed that t=2.068 ve p=.041(<.05) and a significant difference between the pre-test and post-test attitude scores of the experimental group was found, in favour of the post-test attitude scores.

The findings obtained with this study are parallel with those of Çıbık (2006), Uzun (2007) Memişoğlu (2008). The studies carried out in the field revealed that PBL implementations were a positive contribution to students' attitudes. The data obtained through the interviews conducted to find out answers to why students' attitudes towards lessons had increased, show that the participants had fun at the implementation, they were very excited about the product (the resting place for students in the school yard). S7 said the following: "we were very active during the implementation and we always wondered about what would come up". S18 said that "it was a very enjoyable study, we were always active and busy; it was different from the activities we used to do in the past". What is surprising is that the students reported having difficulty at the model stage most, but it was the model stage again which they considered to be the most enjoyable part. With this regard, S5 said: "I think I am not very dexterous, the model was the most challenging task for me to carry out, but I was very happy when it finished". S19 said that "finishing the model was what made me happy most because we had difficulty in fulfilling that task as a group". This can be justified with Bilen's (2002) suggestion: "the choice of appropriate techniques increases students' interest, and participation motivates students, and thus it makes in-class activities more efficient and meaningful".

Discussion

This study, carried out to determine the effects of the Project-Based Learning Approach in the teaching of "Polygon and Plane geometry" units on the 9th grade students' achievements and attitudes, has come up with the following implications;

1. There is a significant difference between the post-test score of the experimental group and that of the pre-test, in favour of the post-test
2. There is a significant difference between the pre-test and post-test attitudes of the experimental group in which the Project-based Learning Approach was used.

PBL, which is defined by Buck Institute for Education as an innovative approach in which students are expected to solve their life-related problems in coopora-

tion as individuals focusing on general concepts, thinking and discipline, aims at facilitating learning within small groups considering that learner-centered learning is significant. However, this approach should not be expected to be appropriate for every subject and every lesson because the subjects of projects may not be interesting for students, they may not be appropriate to the objectives of lessons, or some students may not be good at group work. Besides, we should never forget that the teachers who implement the PBL approach should work in cooperation. We can indicate individuals that contemporary education systems aim at only with the use of studies carried out considering all the variables stated above (those who are willing to do research, can solve problems, have critical thinking skills and can work in groups, etc.)

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UNIVERSITY OF SILESIA
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Pedeutology

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Teacher Perceptions of School Climate in Elementary Schools

Abstract

The purpose of this paper was to investigate the school climate in elementary schools. The sample included 231 teachers in 17 public elementary schools in Burdur, Turkey. An exploratory factor analysis on the OCDQ revealed eight factors and reliability analysis indicated that the instrument was reliable. The subscales emerged were hindrance, disengagement, esprit, intimacy, aloofness, trust, consideration, production emphasis. A cluster analysis was performed and two main clusters formed. In addition to descriptive statistics, t-tests, ANOVA, and correlation coefficients, and regression analyses were used. A negative relationship between production emphasis and disengagement was found while aloofness and trust positively related to hindrance.

Key words: *organizational climate, elementary schools, school climate, principals, leaders, teachers.*

Introduction

Different perspectives in the study of schools lead to different levels of emphasis on human resources. Human resources are considered as the best asset in schools. All the managerial and other activities in schools are interactions among individuals. Since human beings have different values, beliefs, and views, they create difficulties for individuals towards producing common responses. The concept of organizational climate is very useful to study collective perceptions of behavior in

schools. This concept is one of the classical concepts in organizational behavior (Halpin & Croft, 1963; Taguiri; 1968; Katz & Kahn, 1978).

Climate has long been of interest for educational researchers to understand organizational and individual behavior in schools (Anderson, 1982; Turan, 2002). Organizational climate influences the way in which organizations function. Several important characteristics of organizational climate have been noted. Organizational climate is related to internal characteristics, values, norms, attitudes, behaviors, and feelings (Cheong, 1985). School climate has also been defined as the "heart and soul of a school" (Freiberg & Stein, 1999). Anderson (1982) defined four groups of climate factors: *Ecology* included physical and material aspects, *milieu* included composition of school population, *social system* included relationships among individuals, and *culture* included beliefs and values. Creemers and Reezigt (1999) argue that climate factors such as class size, social system, teacher expectations, and orderly school environment are important.

School climate is a general concept that aims to capture the atmosphere of a school. Teachers and administrators experience school climate and it describes their collective perceptions of routine behavior. Moreover, as pointed out earlier, it affects their attitudes and behavior in the school (Hoy & Miskel, 2001). While Halpin and Croft's (1963) study focused on the climate of elementary schools, others extended the concept to high schools. Climate of organizations is conceptualized as the "personality" of organizations, which is similar to the personality of individuals (Hoy, Tarter & Bliss, 1990; Hoy, Tarter, & Kottkamp, 1991).

Organizational Climate Descriptive Questionnaire (OCDQ) served as a conceptual frame and measurement instrument (Hoy & Tarter, 1997). School climate studies included four characteristics of teacher behavior: disengagement (lack of commitment to task); hindrance (teachers' work-overload with paperwork and non-instructional work); spirit (social and professional satisfaction); intimacy (close positive relationship with colleagues).

In addition to teachers, OCDQ includes four characteristics of principal behavior: aloofness (principal keeps distance from staff); production emphasis (teacher feedback and input are not valued, faculty has little autonomy); trust (serves as a role model); and consideration (relates well with faculty and sensitive to their needs) (Freiberg, 1999).

There have been discussions regarding the use of climate or culture in organizations. "Researchers of climate usually deal with perceptions of behavior, use survey research techniques, employ multivariate statistics, have their intellectual roots in industrial and social psychology, assume a rational-systems perspective, and are interested in using knowledge to improve organizations" (Hoy et al., 1991: 8). On

the other hand, scholars who focus on culture study values, norms, assumptions, rites and rituals, and symbols usually use qualitative methods with background in sociology and anthropology. The distinction is subtle but climate is more psychological while culture is more sociological (Virtanen, 2000).

Leadership and school climate are closely related. Some studies suggest that they are intertwined (Kozlowski & Doherty, 1989). It is well argued in the literature that leadership has an important influence on organizational climate. In addition, there are studies arguing that organizational climate is important in leadership effectiveness. However, few studies examined the relationship between the two concepts (Griffith, 1999).

Even fewer studies examined the relationship between vision and school climate. Literature on school climate may be grouped under three strands of research. The first strand is "effective schools research," where the main focus has been to identify school characteristics that try to separate effective schools from ineffective ones. The second strand is "organizational climate survey research," where school climate has been assessed by teachers and other school staff perceptions of school organization (cf. Halpin & Croft, 1963). The final strand is "school culture research," where school climate has been defined as collective organizational orientations of students and school staff, based on shared norms, values, ideologies for individual and organizational behavior (Griffith, 1999b; Hoy, Tarter, & Bliss, 1990; Tagiuri, 1968).

Studies on school climate have been carried out in Turkey. Some of these studies, conducted in high schools with the use of OCDQ-RS and others, attempted to develop new instruments (Günbayı, 2001; Turan, 2002). Celep (2000) studied school climate in 12 elementary schools in Turkey and found out that seven schools had open climate while five of them had closed climate. In the open climate schools, the principals supported the teachers, appreciated their work and took their suggestions into account. In addition, a collegial atmosphere was developed. In the closed climate schools, the principals focused on details, thus leading to a bureaucratic setting and the teachers were not perceived to be free. This created a limitation in principal-teacher interactions. Turan (2002) found significant positive relationships between school climate and principal behavior. For example, he found that supportive leadership was related to engaging teacher behavior while frustrated leader behavior related to organizational commitment. In addition, the author found no relationship between directive leader behavior and teacher commitment.

Methodology

Survey method was used in this study. The sample included 17 (out of 21 schools) elementary schools in Burdur with 231 teachers (89 female and 142 male) who worked in these schools in the 2008–2009 school year. Halpin and Croft's (1968) Organizational Climate Descriptive Questionnaire (OCDQ) was used as a data collection instrument. Exploratory factor analysis was used to establish validity and Cronbach's Alpha was used to check the reliability of the instrument and subscales. KMO was.87 and this indicated that the sample was sufficient and Bartlett's test was significant. Factor analysis results indicated that eight dimensions emerged and sixty-five percent of the variance was explained. Cronbach's Alpha reliability was.78 for the total OCDQ and all the sub-dimensions were over.70.

In addition to descriptive statistics, t-tests, ANOVAs, Pearson correlation coefficients, and regressions were used. In order to find out how these sub-scales related, a Hierarchical Cluster Analysis with Ward's method was conducted.

OCDQ intends to define school climate from open to closed one along a continuum. The OCDQ included 64 items with a four point Likert-type scaling ranging from rarely occurs to very frequently occurs. It focuses on describing interactions patterns among teachers and principals. Eight dimensions were included in the OCDQ while four dimensions were related to the characteristics of teachers (disengagement, hindrance, esprit and intimacy). The rest (aloofness, production emphasis, trust, and consideration) was related to the behavior of the leader.

Results

Concerning school climate, the following eight dimensions emerged: hindrance, disengagement, esprit, intimacy, aloofness, trust, consideration, production emphasis. Statistically significant differences were found between the male and female teachers in all variables except disengagement. The differences were as follows: hindrance ($t_{(200)}$ =2.78, p<.05), esprit ($t_{(200)}$ =2.78, p<.05), intimacy ($t_{(200)}$ =2.43, p<.05), aloofness ($t_{(200)}$ =2.47, p<.05), trust ($t_{(200)}$ =2.49, p<.05), and consideration ($t_{(200)}$ =2.28, p<.05). The means of the males were higher than those of the females in all the variables except intimacy. The scores of the females were higher in this variable than those of the males. Thus, it could be argued that the female teachers might be attributing more importance to intimacy than the other factors in schools when compared to their male colleagues. In contrast, no significant differences were found among the teachers in terms of the field of study.

Pearson correlation coefficients were found between teacher characteristics and leader behaviors as the dimensions of OCDQ. First, positive correlations were presented. Whereas moderately high positive correlations (>.40) were found between group characteristics (esprit) and all the leader behaviors, namely intimacy (.53), production emphasis (.60), consideration (.62). Only a positive low relationship was found with aloofness (.31). The same trend was observed between hindrance and aloofness, trust, and consideration, except production emphasis. A similar finding was reported by Ozturk (2008) in elementary schools in Turkey for the relationship between intimacy and correlated leader behaviors. However, the relationship between hindrance and leader behaviors was positively related in this study while they were negatively related in Ozturk (2008).

Significant low positive correlations were reported between intimacy and aloofness (.20), trust (.25), production emphasis (.27), and consideration (.33). Significant negative low relationship was found between disengagement and production emphasis (-.29) and consideration (.-25). These findings were also consistent with Ozturk's (2008) findings. These correlations indicated that there was a relationship between group characteristics and leader behavior in this sample. Turan (2002) also found a strong relationship between leader behavior and OCDQ-RS in secondary schools in Turkey.

When the mean scores of the sub-dimensions were examined, the teachers ranked disengagement (X =2.08) as the lowest among all the sub-dimensions. This finding might be pointing out that the teachers either did not perceive themselves as colleagues or they might not have difficulty in working together. Esprit was ranked highest (X =4.28) among the school climate dimensions. This finding might indicate that schools are collegial organizations and motivation is an important variable for teachers in this sample of schools. These results indicated that this sample of schools was closer to an open climate rather than closed climate as Hoy, Tarter, and Kottkamp (1991) had argued. This result might be indicating that the principals and faculty of these schools are genuine to a certain degree in their relationships.

Three types of units of analyses were used in climate studies: total analysis, within-group (school) analysis and between-group (school) analysis. Each of these analyses demonstrates various aspects of organizational climate. For example, while total analysis provides us with the relationships among variables across cases (individuals), it ignores group effects. Within-school analysis provides an individual approach while it also removes group effects. Between-group analysis is based on group as the unit of analysis. If one needs to analyze the phenomenon as the property of the group, between-school analysis is more appropriate.

However, among the three types, total analysis is the most commonly used. When school-level analyses are used, cases to items ratio become a problem. Here the total analysis was preferred for the same problems since we had 17 schools in the sample (Sirotnik, 1980; Hoy, Tarter, & Kottkamp, 1991). There were differences among schools in this study when school was taken as the unit of analyses. However, since there were small numbers of teachers in schools, the authors were unable to conduct further analyses based on schools as the unit of analyses.

Table 1. Results of regression analysis on disengagement as the dv.

Variables	B	SEB	β	t	p
Constant	2.489	.309		8.051	.000
Aloofness	.175	.113	.136	1.551	.123
Trust	.029	.105	.032	2.76	.783
Production Emphasis	−.315	.113	−.447	−2.793	.006
Consideration	.051	.107	.078	.473	.637

R=0.35 R^2=0.123 $F_{(4.165)}$=5.536   p=.000

A series of regression analyses was carried out among climate dimensions. Leader behaviors were independent variables (aloofness, trust, production emphasis, and consideration) and teacher behaviors (disengagement, hindrance, intimacy, and esprit) were dependent variables. As Table 1 indicates, the only significant negative relationship with disengagement was production emphasis (−.31). The model explained 13% of the variation on disengagement while other variables were not significantly related to disengagement.

Table 2. Results of regression analysis on hindrance as the dv.

Variables	B	SEB	β	t	p
Constant	1.425	.244		5.830	.000
Aloofness	.252	.090	.216	2.815	.005
Trust	.245	.082	.305	2.981	.003
Production Emphasis	−.024	.088	−.039	−.278	.781
Consideration	.106	.082	.188	1.292	.198

R=0.55 R^2=0.314 $F_{(4.165)}$=18.543   p=.000.

Both aloofness and trust were positively related to hindrance. Trust exerts a greater influence on hindrance than aloofness. The equation explained 1/3 of the variance on hindrance.

Table 3. Results of regression analysis on esprit as the dv.

Variables	B	SEB	B	t	p
Constant	1.682	.245		6.850	.000
Aloofness	.099	.089	.076	1.120	.257
Trust	.094	.087	.107	1.151	.262
Production Emphasis	.138	.089	1.95	1.555	.122
Considerationn	.242	.084	.375	2.885	.004

R=0. 67 R^2=0.44 $F_{(4.165)}$ =32.191   p=.000

When the dependent variable was esprit, only consideration was significantly related to intimacy. The equation explained 44% of the variance on esprit. No significant relationship was found between other independent variables with esprit.

Table 4. Results of regression analysis on intimacy as the dv.

Variables	B	SEB	B	t	p
Constant	2.747	.389		7.059	.000
Aloofness	.199	.141	.120	1.417	.158
Trust	-.003	.131	-.002	-.020	.984
Production Emphasis	-.032	.141	-.035	-.225	.822
Consideration	.278	.131	.340	2.120	.036

R=0.36 R^2=0.13 $F_{(4,165)}$=6.218   p=.000

Final regression was run on intimacy. The only independent variable significantly related to intimacy was consideration. The model explained 13% of the variation on intimacy. No significant relationship was found between the other independent variables and intimacy.

Cluster analysis classifies a set of observations into two or more mutually exclusive unknown groups based on combinations of interval variables. The purpose of cluster analysis is to discover a system of organizing observations, usually people, into groups. Members of the groups share properties in common. Cluster analysis produces a dendogram, in which clearly differentiated groups of objects will have small distances in the near branches of the tree and large differences in the far branches.

A hierarchical cluster analysis was performed to see how the organizational dimensions were grouped. Figure 1 presents the results of the cluster analysis on OCDQ variables. In order to see the clustering trends of OCDQ variables, Ward's method was used. As the distance measure, squared oklid distance was chosen.

Figure 1. Hierarchical Cluster Analysis Dendogram Using Ward's Method.
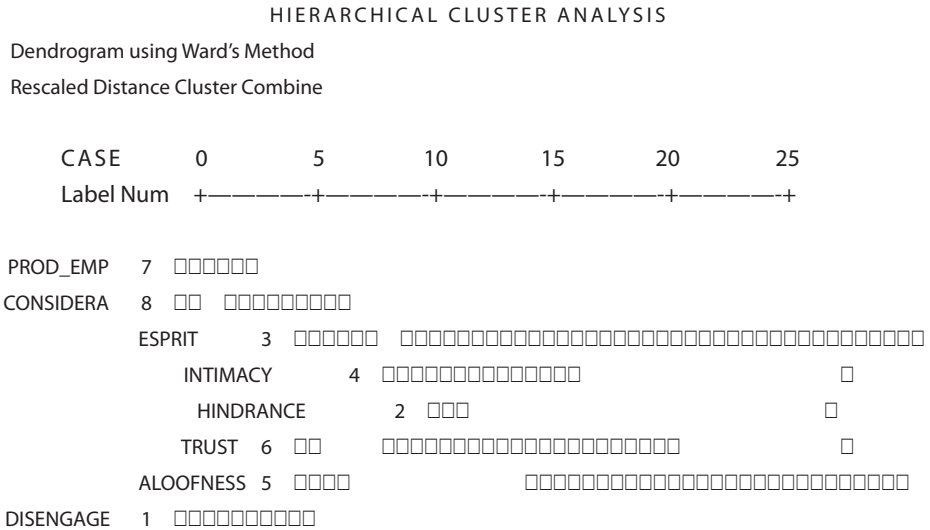
According to the dendogram in Figure 1, these variables were grouped in two main clusters as A and B. These two main clusters were further clustered in two sub-clusters as A1, A2 and B1, B2. These clusters were observed as similarities in the variables. The main clusters, sub-clusters and the names of clusters were presented in Table 5.

Table 5. Clusters formed as denoted by variables and the sub-clusters.

Clusters	Sub Clusters	Variables	Names of Clusters
Cluster A	A1	X7, X8, X3	production emphasis, consideration, esprit
	A2	X4	intimacy
Cluster B	B1	X2, X6, X5	hindrance, trust, aloofness
	B2	X1	disengagement

Table 5 indicates that all the positive dimensions of OCDQ in the Turkish schools clustered together while the negative aspects of OCDQ clustered together. The first main cluster (A) included production emphasis, consideration, and esprit together grouped as the first sub-cluster (A1). The second sub-cluster was intimacy (A2). On the other hand, the second main cluster (B1) included all the negative

aspects of OCDQ. The first sub-cluster (B1) included hindrance, trust, and aloofness while the second sub-cluster (B2) included disengagement.

Although further studies need to be carried out, it is interesting to point out the clustering of OCDQ data in the Turkish schools with the similarities with Halpin and Crof's (1962) classifications of OCDQ for schools. Namely, the two clusters were behavior of the leader and the characteristics of the group. The behavior of the leader included aloofness, production emphasis, trust, and consideration while the characteristics of the group included disengagement, hindrance, esprit, and intimacy.

The first main cluster (A) was on the characteristics of the group (faculty behavior) and the second cluster (B) was on characteristics of leader (principal) behavior. Cluster A1 included production emphasis, consideration, and esprit. This might mean that production emphasis and consideration may be more influential on esprit while they might be less influential on intimacy.

The second main cluster (B) included hindrance, trust, aloofness as well as disengagement. He first sub-cluster (B1) included hindrance, trust, and aloofness. This might be indicating that principal behaviors of trust and aloofness might be creating hindrance on teachers. Later, this condition might be leading to disengaged teacher behavior as seen in the second sub-cluster disengagement (B2).

Conclusion

This study pointed out that Halpin and Croft's (1963) OCDQ is still a valid and reliable instrument for measuring school climate in the Turkish schools in this sample. Few studies examined and used OCDQ in Turkey and more studies are needed.

A moderately high relationship was found between one teacher group characteristic (esprit) and leader behaviors of intimacy, production emphasis, and consideration. The results indicate that leadership plays an important role in school climate. If principals of elementary schools would like to improve esprit in their schools, they need to work on intimacy, consideration, and production emphasis.

The results of regression analyses indicated that there was a relationship between principal behavior and teacher perceptions of school climate in these schools. The following specifies what principals need to do and what they should avoid. First, principals who would like to improve school climate in terms of commitment in their schools should not emphasize production emphasis since it negatively

influences teacher disengagement. Second, if principals would like to move the organization and go by the book with formal and impersonal behaviors, then teachers are likely to feel hindered, i.e. they will feel burdened with heavy and unnecessary bureaucratic work. Third, if principals are to behave warmly and friendly, they are likely to improve esprit in school climate. As a result, teachers will enjoy their work and their morale will be high. Finally, the same treatment towards teachers (consideration) will likely improve intimacy, which means that teachers will experience warm and friendly social relationships.

A hierarchical cluster analysis was used to see how OCDQ variables grouped. The result was interesting: the group characteristics and leader behavior were grouped together. To the authors` knowledge, cluster analysis has not been used in climate studies. For the future, more studies may be carried out on climate studies with the use of cluster analysis.

One of the important conclusions of the study was that although with slight differences, parallel results emerged both from the results of regression and cluster analysys. Cluster A grouped production emphasis, consideration and esprit along with intimacy while Cluster B included trust, aloofness, hindrance and disengagement. Regression analyses gave a little different but similar results.

It could be interesting to use and compare Hoy, Tarter, & Kottkamp's (1991) OCDQ-RE which is the revised edition of OCDQ for elementary schools in Turkey. It is also important to note that the sample of schools included here does not represent all the schools in Turkey. Moreover, this study used a total analysis, new studies are needed on school level analyses to see group effects. New studies should also examine school climate with a new instrument measuring not only teacher perceptions but also student perceptions and also other school climate factors. In conclusion, cluster analysis results provided an interesting picture and this may be a call for more studies on school climate.

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Constructivist Elements in the Textbook Sets of Environmental Studies Subject

Abstract

Textbook sets should be designed according to the constructivist theory of learning and teaching on which the curriculum for the environmental studies subject in the Republic of Slovenia was built. With the empirical research we wanted to establish how teachers evaluate the representation of some constructivist elements in the selected textbook sets for the environmental studies subject. We collected the data on a non-accidental pattern of teachers (n=63) that were teaching the third grade in the primary school. With our research we established that in the teachers' opinion there are differences among the textbook sets regarding the consideration of the selected constructivist elements: stimulation of pupils' independence, guidance into more active forms and methods of work, and mainly representation of the activity of pupils, which should develop their skills and abilities.

Keywords: *environmental studies subject, primary teachers, constructivism, textbook sets, publishers*

Introduction

The constructivist conception of learning and teaching is a fundamental guideline in the conceptual perspectives of the environmental studies subject in the first triad of primary school in the Republic of Slovenia.

Understanding of the environment and the development of a cognitive area are basic objectives of the subject. In a narrower sense, this means getting to know the facts, designing concepts, and in broader sense, developing abilities

(skills) and processes: comparing, sorting, editing, measuring, recording data, forecasting and concluding, experimenting and communicating. With this, an attitude towards facts, openness for accepting other people's ideas and sensitivity to the happenings in the natural and social environment should also be developed. (Krnel, et al., 2003)

The curriculum sets an active role of the pupil in the foreground, their ideas, learning about phenomena through their own concrete experiences and measuring through a variety of different learning forms and work methods and according to the learning – target and development – process-based approach and on the grounds of the perspectives of the constructivist and humanistic theory of learning and teaching.

Pupils should get to know the environment through their own actions (blending, mixing liquids, preparing food, drawing shadows in the backyard, etc.). Through activities they should develop specific procedures: first observing, and then determining the characteristics with experiments, sorting, editing and communicating, and later forecasting and measuring. These procedures enable the shift from hands – actions to head – thinking. (Krnel, 1996).

Pupils' activities are written as a recommendation in the curriculum for the environmental studies subject. Pupils' diverse activities are foreseen. With the analysis of these activities (Hus, 2004) we found that practical activities are prevailing. Then there are slightly less expressive activities, and even less sensory and mental activities which are consistent with the developmental stage of the children. Piaget emphasised that we develop children's thinking at this stage in such a way that we organize as many situations where pupils operate with concrete objects, follow practical operations and internalize them (Labinowicz, 1989).

Textbook sets should also be designed according to the constructivist theory of learning and teaching on which the curriculum for the environmental studies subject was built.

A textbook set is a didactic material that represents a rounded entirety for individual subject classes. Mostly, it consists of a workbook, textbook, manual for the teacher and teaching aids. They should help teachers to achieve learning objectives written in the curriculum in an easier way.

A brief insight into the history of the environmental studies subject (ESS) which was formerly known as the natural and social studies subject (NSS) shows that all the way to the 1990s textbook sets were not available to the teachers teaching this subject. There were specific elements of a didactic set and they were published successively: first a textbook, then a workbook, a methodological manual and then additional components – not as a set (Hus, 2000).

This shortcoming was already overcome in the textbook sets for the natural and social studies in the 1990s, but it was being considered to a greater extent in building didactic sets for the environmental studies classes at the end of the previous century with the school reform (1998).

Still, there remains a topical issue of the role of a textbook and a workbook in the environmental studies learning process. The fact is that autonomy is left to the teacher whether to include them in classes or not.

The aforementioned issue was already the subject at the natural and social studies subject, so let us look at some opinions on this.

Bezić (1973) believes that the NSS textbooks cannot be the primary source of knowledge, but can only help and enable pupils to solve their concrete problems with working by analogy. Regarding the NSS textbooks he also finds that from the point of view of the NSS subject tasks it is very difficult to write a textbook at a national level because every school has different contents, depending on the location of the school. He also points out rapid obsolescence of data in the textbooks because occurrences in nature and society are constantly changing.

Adamič (1990, p. 277) defends the following: "The definition of the role in the learning process must derive from the basic characteristics of the cognitive and thought process of children in this period. That is why mainly direct and practical experiences of pupils are the primary sources of cognition at this developmental stage". He continues: "So there is no indication to assume that a textbook at this stage is the basic source of learning and cognition, but rather that the role of a textbook is primarily motivational and that pupils are indirectly being trained to acquire new knowledge." He concludes with a thought that inflexible and mechanical use of a textbook is therefore inappropriate and ineffective.

Mileksić also talks about the motivational value of a textbook at the class level. He takes cognitive surprise (Vigotski) as a motivational factor which means that a task where the pupil cannot solve a problem without the minimum help of an adult has this motivational value. Taking this motivational scheme into account as well as individual differences among pupils we should differentiate the workbook on at least ten difficulty levels in order to be used as a motivational tool. He concludes: "[…] in the first triad elementary didactics does not need textbook material. […]« or »[…] textbook material in the first triad of the primary school is needed for two functions: for literacy and for control of certain learning methods." (Milekšić, 1992, p. 30) For this purpose he is in favour of textbooks that are adjusted to the developmental stage by thematic clusters in which the pupil looks up for missing information and mainly learns to read.

The participants of the Bled meeting on Textbooks today and tomorrow have recommended that textbooks should be context-processual for the initial level in regards to the natural science textbooks. These are the textbooks that are directed into actions that help pupils to come on their own to as many cognitions as possible. It is about textbooks that help children to learn the processes of gaining new knowledge. "This means that starter textbooks should be organized around some linking topics that are interesting enough to the child to raise and keep his attention. There should also be enough suggestions in textbooks for practical and mental activities. In particular, experiments and observations should be cognitively surprising wherever possible." (Ferbar, 1992, p. 42)

Scribe Dimec (1995, p. 110) also believes that science textbooks are necessary at the class level, but they should be, according to her, designed in a way to direct children into learning with concrete objects and into concrete phenomena. With the help of activities, tasks and questions they should lead children into nature rather than replacing nature by pictures, photographs and texts.

From the opinions presented above we can conclude that the authors have various opinions about the role of a textbook in NSS classes, or now at ES classes, and about how these should be designed. In particular, the latter two opinions are already strongly influenced by the constructivist theory of learning and teaching, which is understandable since both authors were actively involved in the Tempus project at the time.

Method

Today several textbook sets for the ES classes of various publishers are available to teachers. Many factors influence the decision of which set to choose or whether to choose one at all, such as the presentation of a textbook set from an individual publisher, opinion of other teachers, textbook cost, influence of the principal, etc.

With the empirical research we wanted to establish how teachers evaluate the representation of some constructivist elements in the selected textbook sets for the environmental studies subject.

We were interested in:

- Which textbook set teachers use in the environmental studies project?
- How teachers assess pupils' capability of independent learning with the use of the selected textbook sets?
- How teachers assess the representation of individual learning forms in the textbook sets?

- What possibilities particular textbook sets offer for the use of more active learning methods?
- What teachers think of the representation of selected pupil activities in the textbook sets?

With the use of the causal non-experimental method of empiric research we collected data on a non-accidental pattern of teachers (n=63) teaching the third grade of the primary school. Of all the (9) units of the NEI (National Education Institute) of Slovenia we selected an equal share of teachers (11.1%). The pattern selected in this way, therefore, represents a population of Slovene teachers that teach the environmental studies subject in the third grade. For data collecting we used a questionnaire with verified dimensional characteristics (validity, reliability, objectivity). Answers to closed type questions are presented in a tabular form (f, f%), and the existence of differences according to the publishing house had been statistically verified with χ^2-test. When the conditions for the use of χ^2-test were not justifiable, then we eliminated the categories with low frequency or we declined the test.

Results of Research

Analysis of the representation of the publishers' textbook sets

For the environmental studies subject teachers can choose from different textbook sets from different publishers. Our research shows that for the environmental studies subject teachers use textbooks sets from three different publishers. We named them (for anonymity purposes) Z1 (49.2%), Z2 (33.3%), Z3 (17.5%). In Slovenia they belong to the most successful publishers.

Evaluation of the textbook sets from the viewpoint of encouragement for independent learning.

Encouragement for independent learning is one of the basics of constructivist teaching. It is effective and qualitative learning that mentally and emotionally activates students. This is active learning that involves independent searching and thinking, logical dialogue in a group, asking and testing hypotheses; basically it is learning that takes place in a real life environment (Marentič Požarnik, 2003)

The teachers who participated in the evaluation believe mostly that the chosen textbook sets encourage students to be independent (Z1–63%, Z2–76%, Z3–90%). They justify this pointing out the opportunities that the textbook sets offer for research and experimental work as well as verbal and imaginary encouragement for students.

Regarding the publishers, we did not find any statistically significant differences. However, the tendency shows ($\chi^2 = 4.213 < \chi^2$ ($\alpha = 2P = 0.05$, $g = 2$) = 5.991) that the third publisher has some advantages in comparison to the second and especially the first one, from the viewpoint of encouraging students to learn individually.

Assessment of the representation of learning forms in the textbook sets of individual publishers

In the didactic recommendations of the environmental studies curriculum the following was written about the learning forms: "The teaching forms should also be adjusted to the child's age, from group classes (guided experimenting and research) to individual work and working in pairs and groups where knowledge is transferred from one to another and it does not arise only from their own experience." (Krnel, et al., 2003, p. 40).

Table 1 shows how the authors of the textbooks took the aforementioned starting point into consideration according to the teachers' opinion.

Table 1: Number (*f*) and structural percentage (*f%*) of teachers assessing the representation of learning forms in the selected textbook set according to the publisher

learning forms	answers	*Z1*		*Z2*		*Z3*		result χ^2 – test
		f	*f%*	*f*	*f%*	*f*	*f%*	
individual work	Too much	5	45.5	2	9.5	1	3.2	$\chi^2=22.399 > \chi^2$(a = P=0.05, g=4)=9.488
	Enough	6	54.5	12	57.1	28	90.3	
	Too little	0	0.0	7	33.3	2	6.5	
working in pairs	Too much	0	0.0	0	0.0	0	0.0	$\chi^2=.628 < \chi^2$(a = P=0.05, g=2) =5.991
	Enough	4	36.4	12	57.1	20	64.5	
	Too little	7	63.6	9	42.9	11	35.5	
group work	Too much	0	0.0	0	0.0	0	0.0	$\chi^2=2.912 < \chi^2$(a = P=0.05, g=2) =5.991
	Enough	6	54.5	17	81.0	24	77.4	
	Too little	5	45.5	4	19.0	7	22.6	

As estimated by the teachers, individual work is most represented, regardless of the publisher, and pair work is least represented. There is a statistically important difference regarding the publisher in the case of individual learning. The latter can mostly be found in the third textbook set.

Evaluation of the representation of teaching methods in the textbooks sets of individual publishers

Constructivists defend all methods that encourage thinking, enable new, surprising cognitions and unusual ways of observation and open new views, broadening

interests and new horizons. The adequacy of a certain method depends on the goal and the content, on the student and teacher and on the cause and the content (Špoljar, 2004, str. 66).

Table 2: Number (*f*) and structural percentage (*f%*)
of teachers assessing the representation of teaching methods
in the selected textbook set according to the publisher

teaching methods	answer	Z1		Z2		Z3		result χ^2 – test
		f	*f %*	*f*	*f%*	*f*	*f%*	
explanation	Too much	0	0.0	0	0.0	1	3.2	$\chi^2 = 0.863 < \chi^2(a = P = 0.05, g=2) =5.991$
	Enough	10	90.9	19	90.5	29	93.5	
	Too little	1	9.1	2	9.5	1	3.2	
discussion	Too much	0	0.0	0	0.0	1	3.2	χ^2 – test is not necessary
	Enough	11	100.0	21	100.0	30	96.8	
	Too little	0	0.0	0	0.0	0	0.0	
demonstration	Too much	8	72.7	16	76.2	28	91.3	$\chi^2=2.625 < \chi^2(a = P=0.05, g=2) =5.991$
	Enough	3	27.3	5	23.8	3	9.7	
	Too little	0	0.0	0	0.0	0	0.0	
work with the text	Too much	0	0.0	1	4.8	0	0.0	$\chi^2=4.874 < \chi^2(a = P=0.05, g=2) =5.991$
	Enough	5	45.5	14	66.7	25	80.7	
	Too little	6	54.5	6	28.6	6	19.4	
exp. and lab. work	Too much	0	0.0	0	0.0	2	6.5	$\chi^2=7.689 > \chi^2(a = P=0.05, g=2) =5.991$
	Enough	6	54.5	16	76.2	27	87.1	
	Too little	5	45.5	5	23.8	2	6.5	
field work	Too much	0	0.0	0	0.0	1	3.2	$\chi^2=3.229 < \chi^2(a = P=0.05, g=2) =5.991$
	Enough	3	27.3	12	57.1	17	54.8	
	Too little	8	72.7	9	42.9	13	41.9	
project work	Too much	0	0.0	0	0.0	0	0.0	$\chi^2=0.804 < \chi^2(a = P=0.05, g=2) =5.991$
	Enough	5	45.5	10	47.6	18	58.1	
	Too little	6	54.5	11	52.4	13	41.9	

Concerning the methods of explanation, all the teachers believe that it is well represented in all the textbook sets. The same results refer to the methods of discussion and experimental and laboratory work. As to the method of demonstration, the teachers believe that it is too much represented. As far as the method of work with the text is concerned, opinions are divided (54.5% of the teachers believe that it is not sufficiently represented, the other two groups believe that it is sufficiently

represented: 66.7%, 80.7%). Also the opinions on the method of field work and project work are divided.

Statistically significant differences regarding the publishers are evident only in the case of the experimental and laboratory work method. This method is the most represented and this estimates the most teachers who use the textbook set of the third publisher and the fewest teachers using the set of the first publisher.

Evaluation of the representation of individual activities that develop certain skills and competences of students

The textbook sets should encourage students to do different activities to develop certain skills and competences.

Table 3: Numbers (*f*) and structural percentages (*f%*) of teachers per their evaluation of representation of activities that develop certain skills and competences in the selected textbook set according to the publisher

Skills	answer	Z1		Z2		Z3		result χ^2 – test
		f	*f%*	*f*	*f%*	*f*	*f%*	
Perception	Too much	0	0.0	1	4.8	0	0.0	χ^2=2,998 < χ^2(a = P=0,05, g=2) =5,991
	Enough	9	81.8	17	80.9	30	96.8	
	Too little	2	18.2	3	14.3	1	3.2	
Raging	Too much	0	0.0	0	0.0	0	0.0	χ^2=3,247 < χ^2(a = P=0,05, g=2) =5,991
Categorising	Enough	8	72.7	18	85.7	29	93.6	
	Too little	3	27.3	3	14.3	2	6.4	
Counting	Too much	0	0.0	0	0.0	2	6.5	χ^2=3,404 < χ^2(a = P=0,05, g=2)=5,991
Measuring	Enough	8	72.7	20	95.2	24	77.4	
Weighing	Too little	3	27.3	1	4.8	5	16.1	
Comparation	Too much	0	0.0	0	0.0	0	0.0	χ^2=1,064 < χ^2(a = P=0,05, g=2)=5,991
	Enough	9	81.8	17	80.9	28	90.3	
	Too little	2	18.2	4	19.1	3	9.7	
To write down	Too much	0	0.0	0	0.0	2	6.5	χ^2=0.375 > χ^2(a = P=0.05 g=2)=5.991
	Enough	9	81.8	16	76.2	24	77.4	
	Too little	2	18.2	5	23.8	5	16.1	
Data	Too much	0	0.0	0	0.0	2	6.5	χ^2=1.714 < χ^2(a = P=0.05 g=2)=5.991
Collection	Enough	9	81.8	16	76.2	26	83.9	
	Too little	2	18.2	5	23.8	3	9.7	
Concluding	Too much	0	0.0	0	0.0	0	0.0	χ^2=0,985 < χ^2(a= P=0,05, g=2) =5,991
	Enough	6	54.5	14	66.7	22	71.0	
	Too little	5	45.5	7	33.3	9	29.0	

Skills	answer	Z1		Z2		Z3		result χ^2 – test
		f	$f\%$	f	$f\%$	f	$f\%$	
Performing	Too much	0	0.0	0	0.0	0	0.0	$\chi^2=0{,}095 < \chi^2$ (a= P=0,05, g=2)=5,991
Experiments	Enough	8	72.7	16	76.2	24	77.4	
Tests	Too little	3	27.3	5	23.8	7	22.6	
Forming	Too much	0	0.0	0	0.0	0	0.0	$\chi^2=1{,}496 < \chi^2$ (a = P=0,05, g=2)=5,991
Hypothesis	Enough	5	45.5	11	52.4	20	64.5	
	Too little	6	54.5	10	47.6	11	35.5	
Research	Too much	0	0.0	0	0.0	0	0.0	$\chi^2=6{,}122 > \chi^2$ (a= P=0,05, g=2)=5,991
	Enough	5	45.5	15	71.4	26	83.9	
	Too little	6	54.5	6	28.6	5	16.1	

According to the teachers' evaluation, there are fewer activities in the textbook sets that require a thorough understanding, deeper thinking, but enough of those that require students' lower level thinking processes.

Regarding the publishers, there is a statistically important difference only by the research. The percentage of the teachers that use textbook set Z3 and estimate that this activity is sufficiently represented is higher than the percentage of the teachers that think alike but use textbook sets Z2 and Z1.

Conclusion

The teachers for the environmental studies subject have several textbook sets of various publishing houses at their disposal. It is a fact that sets are frequently used for this subject (Vrbek, 2008). There are many factors that influence the decision about which set to choose or whether to choose one at all, e.g. the presentation of a textbook set by the individual publishing houses, the opinion of other teachers, the textbook cost, the influence of the principal, etc.

In our research we established that in the teachers' opinion there are differences among the textbook sets regarding the consideration of the selected constructivist elements: the stimulation of pupils' independence, guidance into more active forms and methods of work, and mainly the representation of pupil activity, which should develop their skills and abilities.

Therefore, one textbook set helps the teachers more than others on a constructivist lesson of the environmental studies subject. However, they believe that they are not enough qualified for this way of work and that they need supplementary training in the form of workshops and with the help of good practice.

In conclusion, with the offer of textbook sets of various publishers the teachers were given an opportunity to assess their quality. In doing so, they should consider didactic guidelines (e.g. Strmčnik, 2001, pp. 139–141; Štefanc, 2005), which draw attention to the danger of exclusivism of specific teaching concepts, and speak in favour of the consideration of various quality principles of the textbook sets, and with a goal to achieve quality knowledge of pupils and achieve the development of abilities for autonomous (lifelong) learning.

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The Attitudes of Academic Teachers as Well as Education Students Towards the Categories of Values Relativised in the Postmodern Culture

Abstract

The article includes research results that were taken into consideration in order to diagnose beliefs concerning values disclosed by academic teachers and the youth studying in education majors. Nowadays, value issues are often taken up, because in the postmodern culture the concern about axiological orientations of people is becoming quite common. The imperative of implementing the value system is strongly attributed to the professional role of the teacher and that is why this phenomenon is worth exploring. Therefore, a part of analysis is included concerning inclinations of the researched people, what they think about selected values and what is the most precious value for them.

Key words: *value system, attitude, postmodern culture, academic teachers, education students*

Introduction

The presented study includes results of poll research that was carried out among academic teachers as well as education students. The subject of this research were opinions on different value categories towards which respondents had to express not only their beliefs, which first of all are associated with the cognitive component of the attitude, but an attempt was made to grasp what is the evaluation of these values and how much it coincides with the active realization and implementation of values. We are aware that the results of poll research conducted among 20 aca-

demic teachers and 53 education students do not give any basis for generalizations; nevertheless they can make up the attitude of conservative projections or conclusion, disclosing their attitudes towards the present reality values. The exploration of stances, opinions or attitudes of just this community seems to be particularly important, since it is one of few professional groups which can significantly influence the beliefs of others, including the youngest people as well as adults.

The results presentation will include statements gathered in May 2012, some of which were discussed in the study: *"Between the alienation and the participation –teachers towards evaluating attributes of postmodern culture"* (Kleszcz, Łączyk, in press). The research results presented here will make it possible to complete the image of to what degree the researched people can be recognized as participating in the area of the analysed values and how indifferent or ambivalently-minded they are towards themselves.

Regarding the fact that the crucial thing is the concept "attitude", firstly we will define what meaning is assumes here. Attitude is certainly described by the opinion and attitudes result, as Oppenheim shows (2004, p. 204) from values, disclosing or declaration of the opinion also makes up the exemplification of some choice. Two research paradigms were made towards attitude categories. Within the confines of one of them it is assumed that attitudes are evidently of a situational character, while according to the second one it is assumed that they are encoded in the memory relatively permanently (Fazio, 1986, in: Maliszewski, 2011, p. 9), and they also act as an "orienting value", directing the entity's attention to those things that are worth possessing or on the contrary (Roskos-Ewoldsen and Fazio, 1992, in: Maliszewski, 2011, p. 9). The attitude category is still some sort of mystery for scholars, triggering off polemics and disputes resulting generally from the fact that people have non-confidential as well as confidential attitudes. We recognize the first ones persuading an individual to reflection, the second ones are of an automated character and there might be a balance between them or they might be divergent (Maliszewski, 1992, p. 13). The attitude predication is nowadays under dispute and in Bohner and Wanke's opinions it means that opinions measured by means of a questionnaire do not always have an influence on behaviours (Maliszewski, 2011, p. 103). However, such a correlation is possible and it can be expected when: "the attitude is strong, easily available, (Fazio, 1986), the person is aware (Eagly and Chaiken, 1993), the person perceives the relation between their attitude and behaviour (Fishbein and Ajzen, 1974), the attitude concerns specific behaviour and coherent beliefs are its source (cf. Bohner, Wanke, 2004, in: Maliszewski, 2011, p. 103)

In the conducted research it was not the aim to measure those beliefs, but it was to establish non-confidential beliefs, on the basis of reflection taken up by

respondents. It is assumed here that the researched group makes up representatives of this part of society that consider and analyse value categories, are aware of them and show cohesion of beliefs in this range.

The role
and importance of the teacher in the transmission of values

Values are a crucial problem for school education. They appear here in the form of the norm system, influencing teachers as well as students. During the education process we refer to values which are not only accepted by students, but students can identify with them (Pasterniak, 1995, p. 37).

The teacher is the person who trains the ability to evaluate as well as stimulates further development, organizing for students contact situations with the world of senses and knowledge. However, we can talk about a complete educational success only when the teacher perceives their professional work as an occasion to fulfil, develop their personality and develop in a moral sense (Bruhlmeier, 1994, p.12).

The teaching profession is characterized by some established tendencies in actions, being meant to lead attitudes or human behaviours. Conscious educational responsibility is shown by behaviours that are in accordance with general values and social expectations. Adopting and preferring specific values and rejecting others is undoubtedly dependent on the social maturity of a human being, their personal predispositions as well as the whole of their educational path (Piotrowiak, 1994, pp. 106–107).

An especially precious attitude of the form tutor is partnership, which K. Dąbrowski (1981, p. 53) perceives as mutually "enriching" with values. The pupil, who achieves the next development level of axiological sphere as a result of the teacher's work, is ready to take up discussion and a mature reflection, has got the ability to view themselves and has also got a high level of empathy and self-awareness.

The teacher's influences in the sphere of value transmission require a special awareness and ability to select them. Thus, as W. Dróżka writes (2001, p. 59), it is worth keeping in mind that teachers are in a special axiological situation and the requirement put in front of them, concerning understanding their extremely crucial role of the transit of values, is nowadays particularly difficult, owing to some characteristics of contemporary culture, among which there are: pluralism, decentering, relativism, and popularization. The after-effects of these phenomena

are observed processes of destruction, breaking up traditional models, principles, norms or axiological orientations.

Research Problems, Methods and Techniques Applied to Personal Research

In the presented article we will separately depict statements of academic teachers and people studying in teaching majors, heading towards revealing their beliefs, opinions of themselves (what would make up some factor of tendency to participate in culture), and then comparing them with their assessments concerning axiological aspects occurring in the contemporary culture, and in the last module we will present values that are perceived as the most precious ones, declared by the participants. In this connection it should be said that research problems which will be tackled in this article are included in the following questions:

1. What is the inclination picture of the researched people, on the basis of which one can conclude indirectly of their participation in the implementation of the value system?
2. What are the opinions of the researched people concerning actually implemented and selected values?
3. How does the value hierarchy of the researched people vary?

In order to get answers to the above-mentioned research problems, a diagnostic poll method was applied with a poll technique, which was worked out with the application of scaling. The structure of the poll questionnaire was based on statements towards which the respondents expressed their stance. Most replies were formed on the model of a Likert-type scale, thus the respondents were asked for indicating to what extent they agreed or disagreed with given statements. The questionnaire consisted of 60 statements, from which only some selected ones were analysed here, regarding the limited study length.

Presentation of research results

In this part of the study we will give replies to the above-mentioned research problems. Results will be presented in tables. Here, we will collect the data, being the basis for working out the first research problem, which is included in the question: *What is the inclination picture of the researched people, on the basis of which one can conclude indirectly of their participation in the implementation of the value system?*

Table 1. The reply distribution of academic teachers and education students in the range of their own inclination assessment

Description categories	Researched people											
	Academic teachers						Students					
	High		Moderate		Low		High		Moderate		Low	
	N	%	N	%	N	%	N	%	N	%	N	%
Tolerance	8	40	11	55	1	5	23	43.3	27	51.0	3	5.7
Independence	9	45	9	45	2	10	16	30.2	36	67.9	1	1.9
Autonomy	9	45	9	45	2	10	26	49.1	26	49.1	1	1.9
Helplessness	3	15	13	65	4	20	8	15.1	37	69.8	8	15.1
Support experience	6	30	14	70	–	–	28	52.8	22	41.5	3	5.7
Contacting	13	65	7	35	–	–	37	69.8	16	30.2	–	–
Discouragement	3	15	12	60	5	25	11	20.8	29	54.7	13	24.5
Uncertainty	1	5	12	60	7	35	6	11.3	31	58.5	16	30.2

The data presented in Table 1 make it possible to assume that:

• regarding tolerance, both the researched groups do not differ significantly. Mostly, high (in each group about 40% of the respondents) and moderate tolerance degrees are attributed to them (about 50% of the researched people in both groups); in the range of independence, the academic teachers declared a high independence degree more often, but the representatives of each group experienced low independence in a slight percentage; regarding proportions, the results concerning autonomy are distributed similarly and here usually a half of each group are also among highly autonomous people; the researched people feel helpless to a low degree, but a certain disproportion was disclosed in the range of the "support experience" category. This one at a high level is experienced by about 1/3 of the academic teachers and over a half of the students. Choices in the range of contacting are also optimistic. The majority of the representatives of each group evaluated themselves as highly outgoing. In each group, over 60% made choices in that way. The evaluation of the next category, i.e. discouragement, does not also allow fir stating essential differences in the researched choices, and moreover the fewest people in each group in the ratio of 15% / 20.8% classified themselves in the highly discouraged category. The most characteristic of the researched people is a moderate level of discouragement. The last category is uncertainty, towards which the respondents expressed their opinions similarly as towards helplessness.

The collected answers make it possible to assume carefully that the representatives of two groups revealed their beliefs determining that they have potential for

working. It is the group that does not feel helplessness, feels discouragement to a low degree, and on the other hand, it declares autonomy and independence. They are important and crucial inclinations in order to be open to changes, and at the same time contribute to reality, foundations of which are real values. Thus, in the next part it is worth having the right to inspect what is the opinion of the researched people on these categories that are nowadays perceived as precious for different reasons, sometimes making up an absolute value, and sometimes only in a sense "manipulative", bringing an individual closer to universal values – recognized as the most important, which status undergoes nowadays the real imbalance and relativisation.

In the context of the above considerations, an interesting question seems to arise: *what are the researched people's opinions on the contemporarily implemented and selected values?* The contents presented below will make up the basis for giving a reply to this question.

Regarding the fact that the poll structure does not enable in this case to compare the data in a tabular way, the results will be presented in the form of description. In this case it is worth starting with the tolerance category, which is perceived as one of the basic universal values. Not going into the field of polemics concerning the essence and range of tolerance, we will present what the researched people think about it. 45% of the researched academic teachers accept completely the thesis that nowadays almost everything and everybody is tolerated most often, and thereby the range of tolerance towards everything has become dangerously wide. The same number of people, 45%, disagreed with this statement. In the case of the students, "yes" answers were given only by 37.7% of the researched people, "no" answers – 39.6% of the researched people. Thus, the difference in this field is not big. Towards the thesis assuming that people most often do not understand the essence of tolerance, 75% of the academic teachers disagreed with this statement, while 56.6% of the students recognized them as true. Next, 65% of the teachers and 62% of the students approved of the thesis that tolerance meant that the approval of everything is rather the young generation's domain. In the field of the next category, i.e. independence, concerning the statement that nowadays everybody leads to become independent of others, "definitely yes" answers were given by 20% of the teachers, 50% of them chose the answer "rather yes", while almost 40% of the students definitely agreed with it, and 26.4% chose the answer "rather yes". The legitimacy of quizzing the following things results from the fact that in our opinions tendencies to individualization are especially strong at present, and it is not wrong unless it results in isolationism or alienation. The researched people had to express their opinions concerning value relativisation. The answers given

to the statement suggested by us, concerning the susceptibility to respect for the contemporary civilization and the development direction as a favourable moral degradation of the human being allow for concluding that the researched people notice such a tendency. It concerns 41.5% of the students and 40% of the academic teachers Furthermore, a question was asked if contemporary youth is perceived in their opinion as "devoid of personal moral compass", towards which the whole researched group first of all did not choose category answers and secondly, "rather yes" and "rather no" answers were divided almost equally, which suggests a high level of belief ambivalence in this field.

The last question that we will answer here was formulated as follows: *What are the most precious values for the researched people?* The researched people were asked to independently write down the most precious values for them, in an unlimited number.

Analysis of the replies given by the academic teachers proves that in the first place they put values often specified as basic, i.e. family and love (60%). Issues concerning friendship are of great significance for them (50% of choices). The researched teachers think also highly of wisdom, knowledge, intelligence (35%). Besides, they appreciate the value of work (35%). They attach less importance to financial stability (15%). Values such as: happiness, sincerity, democracy, empathy, autonomy and attachment were declared very rarely.

Value declarations among the education students were distributed similarly. The researched people recognized love and family almost unanimously (70% and 63%). Next, the desired values were friendship (53%) and health (40%). For the researched people the following values are also precious: sincerity (27%), work (20%) and trust (20%). From among the mentioned values to a considerably less degree there are perceived values of material character as well as those associated with fulfilment, such as: money (6.7%), knowledge, professional satisfaction and inventiveness (3%). Happiness (13%), faith (10%), honesty (6.7%) and respect (6.7%) were also rarely mentioned.

There is no doubt that family and values associated with it make up the life ore of the researched people. The family-friendly character of existence concerns the academic teachers as well as the education students to an equal extent. One should take into consideration the fact that research of this sort, realized with the application of a questionnaire (and especially a poll questionnaire) is characterized by declaring to a large extent. That is why replies to questions concerning values or some behaviour norms do not always reflect the actual views of respondents or their behaviour. The context is the reason for which, while answering questions, some respondents are not guided by their real attitude to discussed issues, but by

what stance one should take on. Regarding mistakes of this sort, we can still present the most precious values in the researched people's opinions.

The presented image of the teachers gives hope that people of such priorities will influence the moulding relations with pupils positively. The research results give hope that their educational influence will be directed towards help in the recognition of moral values and building their proper hierarchy.

Conclusion

Fragmentarisation and the episodic character of different spheres of activity, incoherence, lack of consequence in behaviour, lack of the ability to create lasting relations and interests, escaping from obligations and responsibility, lack of social rooting, excessive self-interest, and lack of life plans for future, relativisation of the value system are characteristic of postmodern people. The postmodern personality is characterized by self-interest ("I myself" narcissistic in the opposition to axiological "I myself"), loyalty changeability, comparing lasting, unquestionable norms to the rules of a game, which one can withdraw from without consequences or regret (Dróżka, 2001, p. 62).

Referring to the above and keeping in mind the value chaos generally stated nowadays and outdating of many culture models so far, bringing some specific evaluation models, one should ask a question: what could make value orientation easier for the young human being? As K. Olbrycht indicates (2004, p.63), the answer can be searched for in the method ground (it means the possibility of using all ways of forming attitudes in their intellectual, emotional and behavioural component) and educational tasks. However, the condition of effective education towards the value seems to be first of all taking the anthropology system into consideration in the education process that would concern the awareness of different possible answers to the question about human identity. What seems to be essential is the tutor's maturity, which should be strengthened by credibility of their personal example with the concept of a human being assumed and suggested by them (Olbrycht, 2004, p. 66).

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UNIVERSITY OF SILESIA

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Pre-primary education

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Comparison of Pre-Primary Education Programmes in the Czech Republic, Poland and the Slovak Republic

Abstract

The adopted international rules for educational programmes have stimulated their reform at the national and local levels. It is interesting to observe how individual countries have approximated them in pre-primary education. This is possible by a comparative approach, which is the content of this study. It is based on results of an analysis of national educational programmes in pre-primary education in three neighbouring countries – in the Czech **Republic, Poland and the Slovak Republic**. It points at what is basically conceptually the same and what is different in the curricula of the studied countries as a result of the trends in curricula in the OECD countries at the beginning of the 21st century.

Key words: *pre-primary education, educational programme, nursery school.*

Introduction

International **unification in educational issues** started a network of coordinated procedures for their research as well as solution under the following two major conditions:

- that educational values and traditions of each country are preserved and up-to-date political, social and economic priorities respected;
- that approaches are implemented, necessary and beneficial for all participating parties and important for mutual understanding and cooperation.

One of the examples of countries´ common educational progression is the 1997 UNESCO document *International Standard Classification of Education* (revised

in 2011 at a general conference in Paris). It contains, among other things, basic rules for the organization of education at individual levels. It is recommended for pre-primary education to observe the following basic criteria (rules):

- Education by programmes;
- Specification of the lowest and highest age limit of children in education;
- Organization of education based on school or centre;
- Inclusion of children with special needs education.

Educational programmes for pre-school children should aim at child comprehensive cognitive, physical, social and emotional development. They should make the child ready for further education and life, for learning with the teacher as well as other people. They are divided into two levels:

- Educational programmes for the youngest children (from age 0/1 to 2/3) usually aim at the overall (psychic, physical and social) well-being of children, the balance between family needs and parents' duties at work, early learning, the child's socialization and prevention of developmental problems;
- Educational programmes for pre-school children (approx. from age three to the start of school attendance) are implemented within pre-primary education (level ISCED 0) and concentrate on education, cognitive and social development of children, early learning and laying foundations of skills necessary for entry into primary school but also for other areas of children's lives. (Early Childhood Education and Care in Europe. Tackling Social and Cultural Inequalities, 2009).

These programmes may have different names, e.g. Children Education and Development, Play School, Pre-school Education. They are created for various groups of children, thus also for children with special needs (*Revision of the International Standard Classification of Education, 2011*).

Individual states coordinate the internationally adopted rules with their own cultural and educational traditions as well as the current variability of conditions in society. Understanding and comparing them contributes to common (global) approaches in the educational issues in connection with national and local characteristics. Findings from comparisons of educational programmes stimulate expert discussions and facilitate conceptual solutions at various levels of school systems.

The issue of comparison of pre-primary educational programmes is worked out also in this study. It focuses mainly on those areas of educational programmes which are internationally accepted in OECD documents (2006, 2012). The purpose of the study is to point at what is the same and what is different in pre-primary education goals, contents and conditions in the Czech Republic, Poland and the Slovak

Republic. Selection of these national educational programmes has been designed for several reasons. They include especially Slavonic traditions (language and cultural affinity), history of common progression (at first in the socialist block and now in the EU) and feasible meetings and exchange of experience by experts in education.

1. Educational Programmes

An educational programme designates a complex of content and methods supporting child learning and development. It answers the questions "what to teach" and "how to teach" (NIEER, 2007). Educational programmes are influenced by many factors, including social values, content standards, research findings, community expectations, culture and language. Although these factors are different in individual countries, states, regions and even in the very programmes, high quality and well-established educational programmes provide good developmental support and cognitive challenges contributing to children's positive outcomes (Frede, 1998). An educational programme usually specifies key educational goals including background concepts and values. It should be well-planned and coordinated in order to ensure that all important areas of learning are covered and child development thus ensured (OECD, 2006). An educational programme generally aims at learning to be (self-confidence and satisfaction with oneself); learning to do (experimenting, play and group interaction); learning to learn (specific educational goals) and learning to live together (respect for differences and democratic values) (UNESCO, 1996).

Individual countries take different approaches in designing educational programmes. There is a need to think beyond dichotomies in educational programmes (academic-oriented vs. comprehensive approaches or staff-initiated vs. child-initiated activities) and consolidate the "added value" of all approaches and learn from them. Almost all the OECD countries have educational programmes or learning standards from age three up until the start of compulsory school attendance. A growing number of countries and regions have started to frame continuous child development from the early childhood and/or birth (OECD, 2012).

In the Czech Republic, Poland and the Slovak Republic, the national educational programme is **a binding and background document for creating school educational programmes** governing pre-primary education in nursery schools. In all the mentioned countries they are designed for children from age 3 to the entry of primary school.

In 2004, the Ministry of Education, Youth and Sports of the Czech Republic published the **Framework Educational Programme for Pre-school Education**

(FEP PE). It defines the appropriate educational offer for each educational area, i.e. teaching and learning methods, a list of expected outcomes, as well as a list of dangers (risks) threatening successful teaching and learning.

In Poland, a **Basic Educational Programme (TOM 1)** is adopted and used for pre-school and elementary education. It applies both to nursery schools and the first stage of basic education. It contains goals, learning outcomes and guidelines, however no specific teaching methods. Teaching methods are designed and specified in school educational programmes together with the methodology for determining school readiness. Teachers may prepare their own educational programmes either individually, or in a team or use educational programmes of other authors, however, they must be consistent with the national curriculum. The chosen educational programme must be approved by the nursery school head teacher upon consultation with the teachers council.

In 2008 the Slovak Republic acceded to a combination of three educational programmes existing since 1948, for children of 3–4 years of age, for children of 4–5 and for children of 5–6 in one educational programme. In comparison with 1948, the new educational programme, **The Child and the World,** contains some changes and at present the content of education and care for children is organized in four main themes: Me, People, Nature, and Culture. Each of these themes contains specified cognitive, motor and socio-emotional skills of children. In addition, it also contains defined performance standards the child must meet before entering primary school (OECD, 2012).

Table 1 complements the above information with exact names of educational programmes in the studied countries, dates of their approval and effect.

Table 1. Names, dates of approval and effect of educational programmes

Czech Republic	**FRAMEWORK EDUCATIONAL PROGRAMME** **for pre-school education** Approved on 03 January 2005 Effective 01 March 2005
Poland	**PODSTAWA PROGRAMOWA z komentarzami** **Tom 1. Edukacja przedszkolna i wczesnoszkolna** Approved on 23 December 2008 Effective 30 January 2009
Slovak Republic	**NATIONAL EDUCATIONAL PROGRAMME ISCED 0 –** **Pre-primary education THE CHILD AND THE WORLD** Approved on 19 June 2008 Effective 01 September 2009

The names of the national educational programmes use the same term programmes. The Czech and Polish programmes are characterized as framework, basic and background. The term used for formal education in the Slovak national educational programme is pre-primary education, in accordance with the international classification of individual levels of education ISCED. The Polish Podstawa programowa progressively interlinks the contents of pre-school and elementary education, while the other two programmes are limited to pre-school education only. When comparing the dates of approval and adoption, there is apparent correspondence between Poland and Slovakia. In the Czech Republic, the pre-school education curricula were transformed about three years before. The common features of the above-mentioned educational programmes are that they are considered the highest curriculum documents in public pre-primary education in the countries; they include a framework, basic, but compulsory content of education; they are structured by relations of didactic categories, i.e. principles, competences, goals, content, means and conditions of education and not by children's age.

2. Results of the Content Analysis of National Educational Programmes in the Czech Republic, Poland and the Slovak Republic

Study of the curriculum documents makes it possible to examine several common ideas and approaches. When identifying common and unique characteristics of pre-primary education in the studied countries, it is certainly necessary to be acquainted with the goals, content as well as conditions of education. Methods and strategies of child development are expected components of the school educational programme, because they are linked with the educational concept of school and the teacher when considering children's dispositions and achievement of educational goals. The goals, content and conditions of education are elementary didactic components steering the educational process at nursery schools. In the given analysis, their significance is projected in determination of three analytical categories with sub-categories as follows:

    2.1 Goals of pre-primary education
        2.1.1 Key competences
    2.2 Content of pre-primary education
    2.3 Conditions of pre-primary education
        2.3.1 Personnel
        2.3.2 Organizational
        2.3.3 Material

The purpose of the study was achieved also using qualitative interpretation of findings in the content of the defined analytical units. Only the most significant findings of content analysis of the national educational programmes of pre-primary education in the Czech Republic, Poland and the Slovak Republic are compared in the limited extent of the text.

2.1 Goals of Pre-Primary Education

In general, educational goals are considered a certain conception of expected or desired results of education. A typical sign of educationally valuable goals is orientation on positive changes in child personality development, life and education as a result of teacher – child (and inter-children) relationships and activities in the educational process using appropriate means and in favourable conditions. Educational goals direct education at the desired, expected child personality development, while respecting and supplying a wide range of educational needs. In connection with education content, goals flexibly and dynamically reflect changes and development of social and cultural systems as well as progressions in the child's knowledge and experience.

The main goals of pre-primary education in the studied national curriculum documents are further specified in educational areas and defined types of key competences. It is apparent that absence of goals makes existence of any educational programme impossible. It follows from the analysis that the goals of pre-primary education in the studied countries contain transformed common values and results of child personality development, which are only differently formulated and divided. The goals of pre-primary education in the Czech Republic, Poland and the Slovak Republic correspond in the following areas:

- child's individuality and autonomy;
- child's competences (capacities);
- social skills, contact and co-operation with peers;
- ability to solve simple problems emotionally and rationally;
- building a relationship to knowledge and learning by playing;
- acquisition of universal human and social values;
- co-operation with the family;
- health protection.

Unlike the other studied programmes, the Polish Basic Educational Programme (Tom 1) has the main goals specified in addition, as the child science, music, theatre, artistic development and awareness of social affiliation and patriotism. The Czech Framework Educational Programme defines 3 framework educational goals and they correspond with the named areas common for all the three countries. The Slovak

pre-primary education goals are particular for the area of creativity, children rights, attributes of pro-social behaviour, national culture and official language. In all the three countries, the goals steer education towards development of child personality, so that the child is competent (prepared) for several areas of life and further education.

2.1.1 Key Competences

Key competences are a part of curriculum documents almost in all the EU countries. It is because encyclopaedic knowledge is not so important for life as key competences, by means of which the child is able to solve problems flexibly, grasp the coherence of pieces of knowledge, reveal the substance of things and phenomena and be practical in activities (Guziová, Podhájecká, 2011). Competences "empower" the child to satisfy his/her needs while making him/her capable to think, act, behave freely and, at the same time, responsibly. The division of competences in education results from the Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning (2006/962/EC).

Due to the developmental specifics and possibilities of pre-school children, each studied curriculum contains defined types of competences. They are divided by content as well as levels the child should achieve by the end of pre-primary education. The following competences are defined in the Czech Republic: learning, problem solving, communication, social and personal, activity-aimed and civic competences. They represent a set of expected knowledge, skills, abilities, attitudes and values, activity-aimed and practically useable, overlapping and interlocking. The child competences according to the National Educational Programme of Pre-primary Education ISCED 0 (2008) in the Slovak Republic are similar. They are psychomotor, personality, social, communication, cognitive, learning and information competences. In both analyzed programmes, the key competences are specified in more detail and applied as child outcome competences at the end of pre-primary education. In the Polish Basic Educational Programme, child competences are not expressed explicitly. They are specified as skills and knowledge the child should have at the end of pre-primary education.

2.2 Content of Pre-Primary Education

At present, the content of education (learning) is understood as:

- a system (established procedure, order dependent on a planned arrangement) of the subject-matter;
- a curriculum (educational programme).

The content is specified so as to facilitate fulfilment of pre-primary education intentions and goals. It is of a framework character, **elaborated in more detail in**

the nursery school educational programme with regard to the nursery school conditions and individual dispositions of the child to be educated by the school curriculum. Thus, the two-level curriculum model of the national and school curriculum applies in all the three studied countries. Czech nursery schools may create even a class curriculum.

According to Kasáčová (2007, p. 98), the **content of education as a subject-matter system** is a system of knowledge, values, ideas and social behaviour patters, cultural tradition, scientific and artistic knowledge. It mirrors socio-political and economic needs of society. It works as a means of child cultivation, reflects the level of knowledge and social experience, ensures integrity and continuity of social development. In its entirety it should also include widely conceived areas of competence acquisition, such as information processing, critical thinking, effective communication, understanding the environment, man and society, as well as oneself, etc.

The basic content **in the Framework Educational Programme of Pre-primary Education** is structured in areas reflecting the child's development, his/her natural life, growing up as well as learning. It is divided by relations gradually formed by the child to oneself, other people and the surrounding world. These areas of the child's interaction are distinguished at the biological, psychological, interpersonal, social-cultural and environmental levels. From them, **five educational areas** are derived: the child and his/her body, the child and his/her psyche, the child and the others, the child and society, the child and the world. The educational areas interlink in teaching unconditionally, because they are closely inter-related. The term subject-matter is replaced by the term "**educational offer**" and has the form of activities, or the child's opportunities to learn. The uniqueness of the educational content of this programme in comparison with the other ones is that the team of authors has formulated **risks** threatening success of the teacher's educational plans, thus warning the teacher of some circumstances having adverse effects in a specific educational area.

The content of **the National Educational Programme for Pre-primary Education ISCED 0 (2008)** in the Slovak Republic is divided similarly, however, the relation of the area of education to the child's interaction is not expressed so explicitly as in the Czech educational programme. It is indicated by thematic units (I am, People, Nature, Culture) and specified by specific goals within performance standards. **Educational areas** are considered to be the child's personality components, i.e. social-emotional, perceptual-motor and cognitive ones. Transformed contents of sciences and social-culturally preferred values are considered a part of educational areas, but they are named as **educational sub-areas** (motor, health, science, mathematical-logical, language, communication, ethic, patriotic, information,

artistic – expressive, work ones) and **cross-section themes** (personality and social development, life and health protection, traffic education, environmental, media, multicultural education, creativity education, pre-reading literacy development, information-communication technologies). The content of education is elaborated in content standards and linked with performance standards determining levels at which the child should master the content. The content and performance standards jointly form educational standards. The content standards contain content respecting the child's developmental potentialities and needs, supported by the child's experience and knowledge, linked with the child's specific performance. The content standards contain the basic extent of the subject-matter (subject-matter minimum) to be mastered by the child adequately to his/her developmental potentionalities.

The **Polish Basic Educational Programme (TOM 1)** has **15 areas of child development, nurture and education** specified:

1. Hygiene and cultural habits.
2. Development of speech.
3. Development of mental activities.
4. Social skills.
5. Health education and physical development.
6. Care for own safety.
7. Education by art – child audience and actor.
8. Education by art – music, singing, dancing.
9. Education by art – various forms of art.
10. Mental development through technological interests.
11. Weather risks.
12. Education for plant and animal protection.
13. Intellectual development by mathematical education.
14. Formation of interest in learning to read and write.
15. Family, civic and patriotic education.

Within each of the educational areas, skills and knowledge are specified which the child should master at the end of pre-school education. They resemble performance standards of the Slovak curriculum, but unlike the Slovak and the Czech educational programmes, the Polish one pays attention to the continuity of the learning content of pre-school and school education.

The numbers of educational areas are different in the respective countries. The Polish basic educational programme (TOM 1) has the most and they are detailed with regard to child personality and social-cultural development. In each educational programme it is certainly possible to "feel" the values, areas of scientific knowledge

and priorities of education in the country, integrated in various themes and contents of education. The effort to eliminate effects of educational components in all the three countries has resulted in linking up various themes or values developing qualities of child personality. On the other hand, such differentiation may result in teachers not giving importance to knowledge and values of various fields of science integrated in the framework of educational areas and thematic units.

2.3 Conditions of Pre-Primary Education

Conditions of education influence the quality of the educational process. They are a complex of internal and external, material and immaterial factors of education. They are considered necessary for the achievement of goals and fulfilment of the educational content. They enable the child to interact with the educational environment and its components so as to learn actively and in the best way. Proper external conditions in nursery school classrooms contribute to a positive educational climate, satisfaction of children's various needs and effective teaching.

The analyzed educational programmes are oriented only on external educational conditions. They include mostly personnel, organizational and material conditions of education, however, they process them in different ways, in different detail, or neglect some in difference to others.

2.3.1 Personnel Conditions

Personnel conditions of child education in nursery schools provided for in the educational programmes of pre-primary education in the Czech Republic and the Slovak Republic correspond. Pre-primary education is conducted by teachers with prescribed qualifications, assisted by teacher assistants. Professional services to children with special needs education are provided by professional staff. Both educational programmes refer to relevant legislation specifying personnel and professional conditions. The Czech educational programme implies also the ethical code for educators and professional self-development. The Polish basic educational programmes (Tom 1) and its comments explain personnel conditions by means of some professional activities, rights and duties of the teacher. Within the personnel conditions, the Czech and Polish educational programmes elaborate teacher-parent co-operation, while the Slovak educational programme misses this issue.

2.3.2 Organizational Conditions

All the three countries have the same school model of pre-primary education organization. Children are educated in classes where they are placed mostly according to age (homogenous classes), but they may also be of different age

(heterogeneous classes). Integration and education of children with special needs in normal classes of nursery schools is identical. There are certain differences in the nursery school daily routine, even though educational and life activities are similar, because they arise from the physiological as well as psycho-social needs of pre-school children. Their division and names are presented in Table 2.

Table 2. Organization and Forms of Education of Children in Nursery Schools

	Organizational forms of daily routine	**Main organizational form of pre-primary education**
Czech Republic	Daily routine activities: • Play • Activity • Motor activities • Outdoor activities • Sleep and rest	**Didactically targeted activity** containing interlinked controlled and spontaneous activities, through which children learn, performed in a balanced manner.
Poland	• 1/5 of time – play • 1/5 of time – outdoor activities • 1/5 of time – various types of instruction • 2/5 of time – free use of time (space for self-help, hygienic, organizational and other activities)	Not specified terminologically, but organizational forms of the day specify the time for various types of instruction, i.e. teaching by the teacher and learning by children.
Slovak Republic	• Play and play-based activities • Motor and relaxation exercises • Outdoor activities • Rest • Activities supporting eating habits	**Educational activity** (purposeful, systematic, meaningful educational activity) performed as a separate organization form or during play and outdoor activities.

A part of organizational forms of the daily routine in all the three countries is play, outdoor activities and educational activities. The Polish educational programme has no motor activities defined as a separate organizational form though, but the teacher has a space for their inclusion in various types of teaching, in play as well as at the time set for free learning. All the three countries consider play the core of the child's natural self-realization. The educational activity as the basic organizational form of pre-primary education is defined only in the National Educational Programme ISCED 0 of the Slovak Republic. In the Czech Republic, a didactically targeted activity is performed in nursery schools.

2.3.3 Material Conditions
The Slovak National Educational Programme ISCED 0 – Pre-primary Education describes conditions of education in detail for the classroom interior as well as for

the nursery school exterior. Requirements are identified for the furniture layout, loungers, classroom arrangement, play and work corners. The Czech educational programme considers material conditions provided in a satisfactory condition. Unlike the Slovak educational programme, they are not so detailed, but identify everything substantial. It should be mentioned that a part of material conditions is also children's works, which nursery school buildings should be set and decorated with. The Polish basic educational programme neither differentiates nor describes material conditions separately, but they are a part of the meaning of the ideas in the comments on the national curriculum.

Additional conditions in all the three national curricula include **conditions for creating school educational programmes**. The Czech and the Slovak educational programmes clearly determine compulsory components of the school educational programme as well as principles for its creation and they are comparable. The Polish educational programme contains recommendations on how to create a school educational programme, what its background should be and what school characteristics it may incorporate. The Polish school educational programme consists of two documents, this is a concept of work and an educational programme, or two programmes, as the case may be, which teachers choose from the offer of ready educational programmes created by experts. Comparison of external conditions also shows that this issue is paid the most attention to in the Czech educational programme. What is positive is also the inclusion of nursery school self-evaluation and evaluation of children in the curriculum in the Czech Republic. In the Slovak Republic this issue of pre-primary education is not worked out and it deserves attention by research and methodology.

Conclusion

The analysis of the national educational programmes in the Czech Republic, Poland and the Slovak Republic shows several common values and approaches in the pre-primary education of children. In all the three countries education is based on humanistic and democratic principles and focused on individualized development of child personality. Nursery schools have become a part of school systems and gained educational autonomy through school educational programmes. Through them, they can introduce innovations, educate children with special needs, use specific conditions of education, improve staff competences, enrich and increase the quality of educational offer. The national educational programmes for pre-primary education in the studied countries also contain

legislation frameworks, basic rules governing the educational process and other explanations – comments on organization and conditions of education in nursery schools. It may be stated that the horizontal comparison of the national educational programmes (in various countries and at the same time) has made it possible to recognize basic common properties of pre-primary education. Internationally accepted rules for national educational programmes and values of education are reflected in the studied curricula. Different are only ways of their elaboration and the extent of attention paid by teams of authors to the content of text in individual parts of curricula. It may be considered a significant difference that, in comparison to the Czech Republic and the Slovak Republic, in Poland compulsory nursery school attendance by 5-year-old children was introduced in 2012, to fulfil the principle of equal chances in education. However, the comparison of national curricula in the present study cannot capture the full breadth of details, specifics and questions of pre-primary education in the individual countries. It specifies what is basically the same and what is basically different, while the findings require a further detailed analysis, or they may inspire other comparative studies between different countries, e.g. in deriving criteria for evaluation of pre-primary education quality at the international level, which experts are concerned with at present. (For more details cf. OECD, 2012).

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Pedagogy
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Authoritarianism and the Views on Rehabilitation Held by the Students of Rehabilitation Pedagogy

Abstract

This paper presents correlations between authoritarianism and the views on rehabilitation. The research was conducted among students of rehabilitation pedagogy (in the Provinces of Silesia and Małopolska). Authoritarianism was investigated from the classical perspective by T. Adorno. The views on rehabilitation were examined using a research instrument devised by Zdzisław Bartkowicz and Paweł Maciaszczyk, who distinguished the following scales: belief in the efficacy of rehabilitation, negativism towards rehabilitation, and biological determinism. Data analysis was conducted aimed at evaluating the impact of selected socio-demographic variables (e.g. the subject's age, year or mode of studies) on the process of shaping authoritarian behaviour and the views on rehabilitation. The research findings prove that there are specific correlations between all the investigated variables, which points to a significant role of authoritarianism as an independent variable (the views on rehabilitation) as well as a dependent one (the subject's age, year or mode of studies).

Key words: *authoritarianism, the views on rehabilitation, belief in the efficacy of rehabilitation, negativism towards rehabilitation, biological determinism, socio-demographic variables (age, year or mode of studies).*

Introduction

The quality and the effectiveness of rehabilitation are mainly determined by personal characteristics, convictions and the views of the rehabilitation educator

concerning the education of social misfits. The educator's personality must be devoid of any qualities of authoritarianism and this applies to an educator and to a rehabilitation educator in particular. Otherwise, the result may be improper social attitudes manifested by cognitive rigidity, conservatism, conventionalism and intolerance. These characteristics prevent the development of a "true" educational relation. Their presence is particularly visible in situations socially marked as negative and burdened with social repulsion because of the sense of threat regarding the stability of the basic normative rules and regulations protecting the social order.

The views on rehabilitation as a determinant of the effectiveness of rehabilitation activities

As Zdzisław Bartkowicz and Paweł Maciaszczyk (2011, cf. Bartkowicz 2010) suggest, a rehabilitation educator should display a humanistic attitude characterized by respect for the dignity of the rehabilitated person and their subjective treatment. This conduct is established in 3 principles of rehabilitation pedagogy, i.e. acceptance, empathic understanding and authenticity. Therefore a rehabilitation educator has to display a certain educational attitude, the basis of which is formed by cognitive flexibility. This feature enables the understanding of the rehabilitated person's complex and complicated world without blaming them and placing the responsibility for who they have become on them (the past and the present). It should create a sense of responsibility for who they will be and may become (the future). Krystyna Ostrowska (2008: 281) notices that a rehabilitation educator cannot be characterized by cognitive rigidity, which polarizes their convictions – from extreme biological determinism, through mental determinism to social determinism.

In the study, while examining rehabilitation pedagogy students' views on rehabilitation, the concept of Zdzisław Bartkowicz and Paweł Maciaszczyk (2011) was used. They distinguished three categories of the convictions:

1. **Faith in rehabilitation** reflects a humanistic approach to rehabilitation and to a social misfit, stressing their dignity and humanity, the right to suitable treatment, moral responsibility and compensation resulting from it. This faith also stresses the possibility and effectiveness of rehabilitation interactions connected with the ability to control one's own behavior. These views highlight a positive outlook on human nature – a human being is good by nature, hence a return to the straight and narrow is possible (a positive concept).

2. **Rehabilitation negativism** reflects lack of faith in the possibility and the sense of rehabilitation, a negative attitude to a social misfit, restrictive treatment and punitivism. In the rehabilitation activity, on the other hand, one can observe excessive external control and the conviction of the necessity of constant control of a social misfit due to their lack of capability of creating the inner control of behavior (a negative concept).

3. **Biological determinism** is described as a tendency to treat social aberration as a hereditary disorder and to treat criminal tendencies as being inborn. This may result from the conviction that human nature is evil to the core (egoistic human nature from Durkheim's point of view) and may cause the formation of the view regarding the senselessness of rehabilitation and lack of its effectiveness (an indirectly negative concept due to a potential conviction about an inalterability of hereditary disorders).

Authoritarianism as an indicator for the views on rehabilitation

The concept of Theodor W. Adorno (2010: 1-14; c.f. Adorno et al. 1960) was accepted as a theoretical basis for the study on authoritarianism. According to this concept, through social system and education unconscious needs and motivational tendencies are developed in the individual. They determine the development of the authoritarianism syndrome, which makes an individual susceptible to the influence of the right-wing ideologies (mainly fascism). The approval of these ideologies determines human behavior which is compatible with it.

In his analyses, Adorno pointed out a group of features that are characteristic of authoritarianism: *conventionalism* – obedience and respect for the authorities; *authoritarian submissiveness* – idealizing the authority and the inability to question and criticize their message (blind and uncritical subordination to the authorities and idealized features of one's own identification group); *authoritarian aggression* – which appears when conventional values are disturbed; *anti-intraception* – based on aversion to psychological analyses, reflectiveness that is pondering over one's own motives for action; *superstition and stereotypical thinking* related to adopting unconfirmed (irrational) and only socially inherited convictions concerning the world and the events that happen in it; *interest in strength, power and "toughness"* connected with perceiving people in terms of strength and domination (strong people who can dominate *vs.* weak people who have to submit themselves); *destructiveness and cynicism* – a tendency to humiliate all the people who are assessed as "strangers" (someone who is not part of my family or a social group); *projection*

usage connected with a predisposition to notice evil powers acting in a hostile environment full of threatening people. It functions as a defense mechanism of personality; *excessive interest in sexual matters* based on an exaggerated condemnation and ambivalent attitudes towards the manifestations of human sexuality and sexual freedom.

Therefore, typical behaviors of an authoritarian individual are simultaneously connected with submission (obedience) to authorities (authoritarian submission) and gaining control over other people who are assessed as weaker (authoritarian domination). At the same time, they are connected with discrimination and intolerance towards others, expressed by means of aggression and punitivism towards other people, which may result from rigidity of thinking (dogmatism) and it induces a distinct polarization of views – the world is perceived as "black and white" (Ray 1979, 1989; Rokeach 1960, 1970; Koralewicz 2008; Misiak 2003).

Authoritarianism is described as an orientation characterized by an exaggerated tendency to succumb to authorities with the simultaneous hostile attitude towards people of lower social standing. Another characteristic feature of authoritarianism is a conventional system of values, where 'good' and 'evil' are sharply separated, whereas deviant groups or minority groups are the overt manifestations of disdain and intolerance. Authoritarianism results from a defective socialization which is the outcome of a strict morality and certain punitivism in upbringing. Defective socialization results in a cognitive style characterized by a tendency to use categories which are clearly defined and contrasting at the same time. It favors the adoption and following of fixed stereotypes concerning social life (dogmatism).

These features may be reflected in the quality of views on rehabilitation and determine the chances of their changes during studies at university.

Authoritarianism versus views on rehabilitation – methodological assumptions and study results

341 students of rehabilitation pedagogy were enrolled in the study (full-time students and extramural students from the University of Silesia (UŚ) (n=169) and the Jagiellonian University (UJ) (n=172). Both groups were compared in terms of the socio-demographic characteristics. The mean age of the subjects was M=23.29 (SD=3.92).

The aim of the study was the analysis of the relationships between authoritarianism, views on rehabilitation and the image of the rehabilitated person and their

selected socio-demographic correlates. These properties may determine the efficacy of rehabilitation actions. Three research questions were put forward:

1. What are the relationships between authoritarianism and the views on rehabilitation and the image of the rehabilitated person?
2. What are the relationships between the views on rehabilitation and the image (features) of the rehabilitated person?
3. What are the correlates of authoritarianism and the views on rehabilitation?

A collection of the following devices was applied:

- **My Views on Rehabilitation and Upbringing** questionnaire by Zdzisław Bartkowicz and Paweł Maciaszczyk (2011), which consists of 3 subscales (rating scales of the Likert type) on the basis of the factor analysis. In the conducted study their reliability occurred to be close to the reliability obtained by the authors of the devices: *faith in rehabilitation* – Cronbach's alpha=0.79; *rehabilitation negativism* – Cronbach's alpha=0.81; *biological determinism* – Cronbach's alpha=0.53.

- The **F – scale** by Theodore W. Adorno enables to determine a general level of authoritarianism and its component features (*conventionalism, authoritarian submissiveness, authoritarian aggression, anti-intraception, superstition and stereotypical way of thinking, interest in strength, power and "toughness", destructiveness and cynicism, the usage of projection, an excessive interest in sexual issues*). It is a Likert – type four-point scale. The reliability of the scale measured by Cronbach's alpha was 0.74.

- The **Image of the Rehabilitated Person** questionnaire of our authorship. 28 features were selected on the basis of the previous statements of students regarding the characteristics of the rehabilitated person. They were given 5-point rating scales. (1 – the rehabilitated person is certainly such a person; 5 – the rehabilitated person is certainly not such a person). The results underwent factor analysis. Based on the analysis of the main components (*Varimax*, orthogonal rotation) 5 factors were distinguished which explained altogether 58.4% of variances (the following factors explained 17.83%, 16.79%, 10.82%, 7.31% and 5.65% of variances).

Factor 1 included the following features (in the brackets factor loadings are provided): impulsive (0.776), vulgar (0.733), aggressive (0.730), short-tempered (0.725), devious (0.674), greedy (0.638). Factor 1 was termed **antisocial features** and its reliability measured with the use of Cronbach's alpha index was 0.86.

Factor II included the following features of the rehabilitated person: forgiving (0.731), trustworthy (0.690), hard-working (0.679), honest (0.659), cooperative (0.655), devoted to family (0.587), able to forgive (0.571), calm (0.470). This factor

was termed **pro-social features**. The reliability of this factor was 0.88 (Cronbach's alpha).

Factor III, termed **determination**, included 6 features; these are as follows: resolute (0.742), persistent (0.638), ambitions (0.589), sensible (0.534), helpless (-0.508), lazy (-0.446). The reliability of factor III measured with Cronbach's alpha was 0.75.

The next factor, **factor IV**, included the following features: loyal to friends (0.796), reliable (0.552), loyal (0.434), being able to keep your word (0.413), able to refuse (0.395). This factor was called **reliability in relationships** (Cronbach's alpha=0.55).

Factor V included three features of the rehabilitated person. These are as follows: assertive (0.782), independent (0.456), tenacious (0.442). This factor was termed **assertiveness** and the reliability measured with Cronbach's alpha was 0.31.

1. **Authoritarianism and the views on rehabilitation and the image of the rehabilitated person**. The relationships between authoritarianism (general level and components of authoritarianism) and *views on rehabilitation* (faith in rehabilitation, rehabilitation negativism and biological determinism) and *the image of the rehabilitated person* are shown in the tables below (Tables 1-2). These tables show the results of the correlation analysis between particular variables by means of the Spearman rank correlation coefficient (*p<0.05; **p<0.01).

As anticipated, based on the theoretical assumptions concerning the nature of authoritarianism and convictions about the social world (Table 1), the general level of authoritarianism correlates poorly negatively with **faith in rehabilitation** (positive concept) and strongly positively with rehabilitation negativism (negative concept) and moderately positively with biological determinism (statistically significant correlations). It reflects a generally negative vision of the social world and the vision of possibility of changes, which is characteristic of authoritarian individuals. Low faith in rehabilitation is mainly determined by *destructiveness* and *cynicism* (tendency to humiliate "strangers" who are social misfits) and, to a lower extent, by *conventionalism* (obedience and non-reflective respect for authorities). It can be assumed, therefore, that the mechanism weakening faith in rehabilitation is a defense mechanism. It is connected with the common, stereotypical and taken from authorities (society) perception of the world as evil and full of danger from which people have to protect themselves. Obedience to social authorities (socially created negative image of social misfits) has a decisive meaning here for limiting faith in the possibility and effectiveness of rehabilitation, which is the result of former socialization.

However, **rehabilitation negativism** is positively correlated with all the components of authoritarianism (statistically significant relationships). It is

Table 1. Relationships between authoritarianism and views on rehabilitation in the studied population of the students of rehabilitation pedagogy – the Spearman correlations (N=341)

Views on rehabilitation / Authoritarianism and its components	Faith in rehabilitation	Rehabilitation negativism	Biological determinism
Level of authoritarianism	−0.112*	0.535**	0.275**
Conventionalism	−0.107*	0.284**	0.112*
Authoritarian submissiveness	−0.033	0.200**	0.123*
Authoritarian aggression	0.005	0.399**	0.063
Anti-interception	−0.036	0.219**	0.152**
Prejudice and stereotypes	−0.030	0.295**	0.094
Faith in power and strength	0.057	0.222**	0.161**
Destructiveness and cynicism	−0.160**	0.304**	0.221**
Projection	−0.093	0.391**	0.272**
Overestimation of the role of sex	−0.074	0.261**	0.131*

defined mainly by *authoritative aggression* (showing antisocial and aggressive behaviors towards certain social groups) and *projection* (predisposition to notice evil powers acting in the hostile and threatening environment). It indicates that rehabilitation negativism is rationalized by students who are convinced of the social harm of deviant behaviors. Because of that, it is justified by the threat to the conventional system of values, namely, that which is shared by the majority (social authority). The mechanism of the victim's dehumanization is of some significance here. It refers to attributing to the victim some negative features, perceived as threatening, hence deserving condemnation and punitive actions. Except for authoritative aggression, prejudice and stereotypes, authoritarianism with all its components is positively correlated with biological determinism. This view on rehabilitation is mainly determined by *using projection*, as well as by *destructiveness* and *cynicism*.

Assuming that faith in rehabilitation and rehabilitation negativism are two polar opposites of the same dimension (convictions about the sense and effectiveness of rehabilitation) generally, it is evident that the negative correlation between authoritarianism and faith in rehabilitation is significantly weaker than the positive correlation between authoritarianism and rehabilitation negativism. It means that an increase in negativism may be determined by other factors, e.g. convictions

about biological determinism considerably connected with authoritarianism may constitute the indirect variable.

The quality of the image of the rehabilitated person is a peculiar confirmation of the way of interpretation of the relationships between authoritarianism and the views on rehabilitation (Table 2).

Table 2. Relationships between authoritarianism and the image of the rehabilitated person – the Spearman correlations (N=341)

Authoritarianism and its components	Anti-social features	Pro-social features	Determi-nation	Reli-ability in relations	Assertive-ness
Level of authoritarianism	**0.191****	−0.089	−0.076	**−0.140****	0.012
Conventionalism	0.043	−0.053	−0.033	−0.037	−0.019
Authoritarian submissiveness	0.076	−0.041	−0.046	−0.029	−0.004
Authoritarian aggression	**0.111***	−0.083	−0.029	−0.034	−0.034
Anti-interception	0.077	−0.065	−0.032	−0.094	−0.096
Prejudice and stereotypes	0.057	0.010	0.000	0.010	−0.050
Faith in power and strength	**0.107***	−0.034	0.015	−0.082	0.103
Destructiveness and cynicism	**0.109***	−0.075	−0.095	**−0.129***	0.054
Projection	**0.168****	−0.080	−0.085	**−0.139***	0.023
Overestimation of the role of sex	**0.181****	−0.055	−0.064	−0.101	0.019

In terms of the image of the rehabilitated person, authoritarianism is positively correlated with *antisocial features* and negatively with *reliability in relations*. Both correlations are determined mainly by *projection* (a feature of authoritarianism). It means that a generally more negative image of the rehabilitated person in authoritarian people is a result of the use of a defence mechanism against a potential threat from social misfits (prediction of misbehaviors functioning as defence against them). Furthermore, it should be noticed that next to projection, only *destructiveness* and *cynicism*, i.e. a tendency to have a generalising view and humiliate everyone regarded as "a stranger," play an essential role in the case of reliability in relations. However, in the case of the tendency to attribute antisocial features to rehabilitated people, additionally the *overestimation of the role of sex*, *authoritarian aggression* and *faith in power and force* are significant, which is more difficult to explain. It is yet possible to believe that these features can generally determine the perception of the world as a place full of threats, which one should oppose. The following

triad, i.e. threat and anxiety, depreciation of "strangers" and the conviction of the necessity to "discriminate" the phenomena considered to be negative, is regarded to be the determinant of the way the results of rehabilitation are perceived. The results determine the misfit individual in negative categories (pessimistic view).

Authoritarianism is therefore connected with the negative view of the effects of rehabilitation. An educator characterized by a higher level of authoritarianism will perceive the rehabilitated person as a person who is characterized by having a higher intensity of antisocial features and a lower intensity of features suggesting reliability in interpersonal relations. Such perception of the effects of rehabilitation in accordance with the mechanism of a self-fulfilling prophecy will undoubtedly influence the course of rehabilitating interactions and their final effect.

2. **Attitudes towards rehabilitation and the image of the rehabilitated person**. It is obvious that attitudes towards rehabilitation have a direct impact on the way of forming convictions regarding the rehabilitated person (Table 3).

Table 3. Views on rehabilitation and the image of the rehabilitated person – the Spearman correlations (N=341)

Views on rehabilitation / Image of rehabilitated person	Anti-social features	Pro-social features	Determina-tion	Reliability in relations	Assertive-ness
Faith in rehabilitation	−0.339**	0.345**	0.357**	0.399**	0.036
Rehabilitation negativism	0.221**	−0.132*	−0.173**	−0.172**	−0.037
Biological determinism	0.083	−0.002	−0.016	−0.049	−0.069

These features are treated as a result of the rehabilitation process. The analysis of correlations in this field revealed no significant correlations between feature perception and biological determinism. These results seem to be obvious as the efficacy of rehabilitation is related to the perception of the socio-cultural and environmental determinants of social aberration. These determinants are reversible (i.e. they may be eliminated). Faith in rehabilitation correlates moderately negatively with antisocial features, and mildly negatively with pro-social features, determination and reliability in relationships. However, rehabilitating negativism correlates poorly positively with anti-social features and poorly negatively with pro-social features, determination and reliability in relations. This finding is surprising as it contrasts with the theoretical assumptions. According to those assumptions, faith in rehabilitation should be more explicitly correlated with the tendency to a positive

perception of the outcomes of rehabilitation, whereas rehabilitation negativism ought to strengthen the negative vision of the rehabilitated person. It may be stated that the views of young students are poorly structuralized and that they function as a set of relatively independent convictions that are internally contradictory. This is consistent with the dogmatism theory by Milton Rokeach (1960, 1970). According to this theory, a characteristic feature of authoritarian (dogmatic) people is that they do not structuralize their convictions, which may constitute an internally incoherent set. However, this points to the fact that it is authoritarianism that is the variable interfering in the formation of attitudes towards rehabilitation and its effects, which was confirmed earlier.

The views on rehabilitation did not correlate with the perception of the rehabilitated person as an assertive one. The theoretically validated negative correlation between the views on rehabilitation and the image of the rehabilitated person is generally visible. It means that the convictions indirectly determine the perceived effectiveness of the rehabilitation process. However, authoritarianism (dogmatism) is the viable which determines this relation. Authoritarianism determines the internal incoherence of convictions (lack of reflective and logical structuring of theirs).

3. **The correlates of the authoritarianism and the attitudes towards rehabilitation**. Correlation analysis of authoritarianism, the views on rehabilitation and the image of the rehabilitated person compared with the time of education (year of studies, the system of studies, i.e. full-time, extra-mural) and the way of education (university) showed several interesting correlations (Table 4).

Table 4. Correlates of authoritarianism, views on rehabilitation and the image of the rehabilitated person (year of studies, university, system of studies) – the Spearman correlations (N=341)

	Variables	Year of studies	University (UŚ=0; UJ=1)	System of studies (full-time=0; extra-mural=1)
	Authoritarianism	0.085	−0.028	**0.237****
Views on rehabilitation	Faith in rehabilitation	**−0.193****	−0.054	**−0.184****
	Rehabilitation negativism	−0.025	−0.082	**0.158****
	Biological determinism	0.093	**0.149****	**0.183****
Image of the rehabilitated person	Anti-social features	0.088	0.085	**0.167****
	Pro-social features	−0.067	−0.091	−0.100
	Determination	**−0.146****	−0.060	**−0.177****
	Reliability in relations	**−0.134***	−0.077	**−0.165****
	Assertiveness	−0.045	−0.041	−0.034

With the length of education, faith in rehabilitation among the students decreases. Moreover, the intensity of features connected with determination and reliability in interpersonal relationships diminishes in the perception of the rehabilitated person. In other words, a tendency to a positive perception of the rehabilitation process decreases. This determines the process of education (its quality) of rehabilitation educators (an effect opposite to the one expected). Simultaneously, the year of studies is in relation neither with authoritarianism nor with the other views on rehabilitation or with the features that create the image of the rehabilitated person.

The biggest number of relationships with the analyzed variables is determined by the system of studies which as the only variable connected with the education of rehabilitation educators correlated with authoritarianism, all views on rehabilitation and with the image of the rehabilitated person (except for assertiveness and pro-social features). After the trichotomization of the variables (according to 33rd and 66th percentiles) using the Chi-squared test, the significance of differences between full-time and extra-mural students was additionally checked. Except for the perception of the rehabilitated person as an assertive one (p=0.564), the system of studies differentiated the remaining characteristics of the rehabilitated person (including pro-social features), authoritarianism and views on rehabilitation on the level of significance of p<0.01. The extra – mural students are characterized by a higher level of authoritarianism, rehabilitation negativism, biological determinism and weaker faith in rehabilitation than the full-time students. Moreover, the extra-mural students perceive the rehabilitated person as more antisocial, someone who fails in interpersonal relations and is less determined to do some action. This indirectly shows the significance of age and potential occupational experience for shaping the views concerning the rehabilitation process (their dogmatization).

The university where the education takes place does not correlate either with authoritarianism or with the image of the rehabilitated person. However, concerning the views on rehabilitation, there is only a correlation with biological determinism (similar results were obtained by the Chi-squared test). The students of the Jagiellonian University are characterized by a higher level of biological determinism in comparison with the students of Silesian University, which indicates a different type of their education that is indirectly 'in favour' of rehabilitation negativism which is positively correlated with biological determinism.

Several final conclusions

It is not possible to provide a clear and structured interpretation of the existing correlations on the basis of the obtained results but the conclusion can be drawn that the correlations exist, which requires, however, wider analyses eliminating methodological deficiencies of the conducted studies (the number and selection of groups, lack of detailed analyses of correlations between different variables). However, the existence of correlations between authoritarianism (socially determined), and the views on rehabilitation (faith in rehabilitation, rehabilitation negativism, biological determinism, the image of the rehabilitated person), views on rehabilitation and the image of the rehabilitated person (determined both by socialization and by professional education) were confirmed.

An attempt was made to determine correlates between authoritarianism and the views on rehabilitation, which point to a complex set of intervening variables in the relationship between authoritarianism and the views on rehabilitation. They, however, require further and more thorough empirical verification. In a practical sense, the result of the analyses conducted indicates a need for a reflective inspection of both the pre-selection procedure of prospective rehabilitation students (authoritarianism as a criterion variable) and the process of professional education during the course of studies (evoking a pessimistic or incoherent concept of the rehabilitation process and its results determined by the image of the rehabilitated person).

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Health Locus of Control of Undergraduates of Józef Piłsudski University of Physical Education in Warsaw*

Abstract

Background: The aim of the research was to determine the health locus of control (HLC) of undergraduates of Jozef Pilsudski University of Physical Education in Warsaw.

Material and Methods: The subjects were 241 undergraduates (111 female and 130 male). **Polish version of Multidimensional Health Locus of Control Scale** (MHLC; Wallston & DeVellis) was applied.

Results: Results show that Polish undergraduates presented a moderate level of belief personal control over their health. Investigated group is quite homogeneous with regard to HLC.

Conclusions: Comparisons with earlier research data show that greater differences in HLC appear for undergraduates of the same faculties but from different universities than for students from various faculties within one university.

Key words: *health locus of control, undergraduates, physical education*

Introduction

Polish physical education (PE) teachers nowadays face a new significant challenge. New general school curriculum does not include the introduced in 1999 specific educational path called "pro-health education". Health education tasks in junior high and high schools have been transferred to PE teachers. Hence, PE curricula for all levels of education are additionally supplemented by certain requirements related to health issues. A group of themes under the name "health education," provided under new regulations in junior high and high schools, covers mainly the problems of psychological and social health and the most essential health-related individual and social skills. High school students should therefore learn what factors positively or negatively impact on their health and general well-being; which of them may be controlled by an individual; which behaviour may be beneficial or detrimental to one's health and how to make reasonable and health-beneficial decisions concerning our lives. The task of the PE teacher would also include providing some background information on the value of health in human life as an important personal and social capital, how to maintain health in youth, early and late adulthood as well as what it means to be a health-responsible individual*.

To effectively introduce the program of health education, the PE teacher should not only be equipped in an essential knowledge about health (from pedagogy, psychology and sociology of health), but he or she should also be truly convinced that every individual is responsible for their own health and has a real influence on the state of health through the whole range of health-related behaviour (both actions that are beneficial and hazardous, which increase the probability of illness or disorders). The question may be posed whether PE teachers and candidates for PE teachers, PE undergraduates, are convinced as to the fact that health depends on their behaviour and actions. One of the more specific questions we wanted to answer in this paper concerned health locus of control of this group of students.

The personal belief that an individual has a real impact on their own health seems to be important not only for the PE teachers involved in health education. It is equally important for physical activity promoters. It is quite difficult to promote a physically active life style, play the role of a leader for a group of recreationists without personal consent as to the fact that the state of health does not depend only on factors external to an individual, i.e. inherited genes, fate, pure chance or

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* Source: http://wszpwn.pl/pub/Reforma_programowa/Podstawa_programowa/pdst_prog_wf_edp.pdf; accessed on 3.10.2011

even the care from omnipotent health professionals. Health locus of control also seems to be one of the factors influencing the level of professional involvement of physiotherapists. Effective fulfilment of their professional duties demands the belief that the results of therapy depend to a great extent on the patient him/herself.

Health locus of control is a type of general locus of control concept (Rotter, 1966). It is multidimensional and consists of internal HLC and external locus expressed in the form of beliefs about the impact of others (powerful others HLC) and the play of chance (chance HLC) (Ogińska-Bulik and Juczyński, 2008). Internal HLC is related to accepting more responsibility with regard to one's own health.

Although health-related actions, both positive (beneficial to individual health: health promotion, prevention and recovery) and negative (detrimental to individual health, posing a risk to health or disturbing the process of recovery), are related to health locus of control, relevant research results are not consistent as to the character of their relationship. Incoherent conclusions concern the relationship between health locus of control and smoking (Bennett, Norman, Moore, Murphy, Tudor-Smith, 1997; Callaghan, 1998; Jensen, Counte, Glandon, 1992), healthy diet, alcohol consumption and oral hygiene (Bennett et al., 1997; Callaghan, 1998; Duffy, 1997; Macgregor, Regis, Balding, 1997; Reeh, Hiebert, Cairns, 1998).

Marshall (1991) shows a complex nature of the three primary dimensions of HLC. Perceived internal locus of control is associated with the belief that the individual is capable of controlling and supporting their own health (and therefore takes illness preventive actions) as well as with a feeling of mastery and guilt. Chance perceived as the major factor determining one's health is associated with the belief in fate, but also with accepting the role of genes and environmental factors over which the individual has little control. This complexity of relations may be decisive with regard to sometimes contradictory research results.

Investigation into Canadian students aged 14–20 (Reeh et al., 1998) showed that the respondents presenting internal HLC were more physically and psychologically healthy, more often took health prevention actions and used external social support for this purpose, were more physically active and had healthier eating habits. Another research (Vandervoort, Luis, Hamilton, 1997) showed that beliefs of students from a multicultural American college about the influence of others on their health was positively correlated with the level of depression, anxiety and hostility and recently experienced physical symptoms of illness, while believing in the major role of chance was additionally correlated with chronic illnesses symptoms and severe health problems. At the same time, scores in both scales of external HLC were not correlated with healthy habits, which according to authors suggests that beliefs in health control impact on health only when associated with

psychological health. In the case of research on Australian students, external HLC was (alongside self-efficacy perception) a significant predictor of the level of emotional distress (Shelley and Pakenham, 2004). Another research shows that adults with internal HLC had a higher level of physical health, lower depression, anxiety, stress and psychotic symptoms (Seeman and Seeman, 1983; Schwarzer, Jerusalem, Kleine, 1991).

Research carried out on Polish population revealed a correlation between external HLC and more frequent health preventive actions; internal HLC was correlated with better compliance with daily healthy behaviour (Juczyński, 1997). The research on 457 students from Podkarpacki region in the south of Poland did not reveal differences in health locus of control for smoking and non-smoking patients. A higher level of internal HLC was yet observed in men (Penar-Zadarko, Zadarko, Binkowska-Bury, Januszewicz, 2009).

An important determinant of locus of control is the state of health (Juczyński, 2009). Healthy individuals put more emphasis on internal HLC. Individuals with severe health problems (dialysis patients, cancer treatment patients) believed their health was dependent on factors they could not control (Juczyński, 2009). Research evidence shows that students reach higher scores in the internal control scale in comparison to teachers and the investigated groups of patients (diabetics, dialysis patients, male post-infarct patients, women after mastectomy and in endangered pregnancy) and lower scores in the case of the perceived impact of powerful others and the play of chance (Juczyński, 2009).

An interesting research question is what is the health locus of control of PE students and tourism and recreation students becoming professionally involved in an active lifestyle and health promotion and maintenance as well as physiotherapy students trained for the domain of health recovery. The aim of the research presented in this paper was to determine the HLC of the undergraduates of J. Pilsudski University of Physical Education in Warsaw.

Material and Methods

Participants

There were 241 undergraduates investigated in the research. They were full-time students from the faculty of physical education (*n*=96; 39.8%), faculty of tourism and recreation (n=74; 30.7%) and faculty of physiotherapy (*n*=71; 29.5%). The sample included 111 women (46.1%) and 130 men (53.9%). The distribution of men and women was similar in of thte each three subgroups.

Methods

The Multidimensional Health Locus of Control Scale (MHLC) by K.A. & B.S. Wallston and R. DeVellis was applied in the research. The Polish adaptation of this scale was prepared by Z. Juczyński (2009). The scale consists of 18 items concerning generalised expectations in three dimensions of health locus of control (6 items in each subscale): 1) Internal control – belief that the individual has a power of controlling their own health; 2) Powerful others – belief that our state of health is a result of actions of others, mainly medical professionals; 3) Chance – belief that our health is dependent on the play of chance or on other external factors.

The scale has a sufficient level of reliability (Cronbach's alfa varied between 0.54 and 0.74; the test-retest correlation coefficient varied from 0.38 to 0.72 depending on the subscale and scale version). The scale's validity was defined through correlating internal locus of control with self-efficacy level (0.32), self-esteem perception (0.32) and perceived value of health (0.30). Differences observed for the group of patients and healthy respondents were also in compliance with the theoretical background of the research. This proves satisfactory validity of the research tool (Juczyński, 2009).

Results

For the Polish version of Multidimensional Health Locus of Control Scale (MHLC) there are no norms for defining the level of investigated dimensions of health locus of control available. Some information on this may be received only from the comparison of our data with other MHLC-based research.

Table 1. Multidimensional Health Locus of Control Scale scores (M±SD) of J.P. University of Physical Education (UPE) students and comparative groups

	UPE students (n=241)	Polish students (n=97)[a]	Teachers (n=70) [a]	European university students (n=7155)[b]
Internal control	27.80±4.288	28.61±3.73	27.81±4.48	24.1±4.3
Powerful others	16.43±4.896	18.76±4.19	20.00±4.61	17.1±4.7
Chance	16.74±5.057	15.65±5.12	16.93±5.61	15.8±4.2

[a] Juczyński (2009);   [b] Steptoe and Wardle (2001)

The undergraduates of the University of Physical Education presented a lower belief in the influence of powerful others (t=4.16; $p < 0.001$; d=0.49)) and a some-

how stronger belief on the role of chance (tendency level: $t=1.79; .05 < p < 0.1$; $d=0.22$) in comparison to the students investigated by Juczyński (2009); both compared groups did not differ with regard to the internal HLC ($t=1.62$; $p <.05$). The students of the University of Physical Education do not vary from Polish teachers on the internal locus of control ($t=0.017$; $p > 0.05$) and the play of chance ($t=0.271$; $p > 0.05$), while they scored lower results in the powerful others subscale ($t=5.442$; $p < 0.001$; $d=0.74$).

Due to the sample size, a good reference point for our data is the research by Steptoe and Wardle (2001), who surveyed over 7000 students from 18 European countries, including Poland ($n=396$). In comparison to this group, the University of Physical Education students present stronger internal control ($t=13.212$; $p < 0.001$; $d=0.86$), a weaker belief on the play of chance (t=3.405; p < 0,001; $d=0.14$) and the influence of powerful others ($t=2.168$; $p < 0.05$; $d=0.22$).

Summing up, the Warsaw University of Physical Education students were the least prone of all the above-mentioned investigated groups to the belief that their health depends on powerful others. Their belief on having personal control over one's own health was also stronger and they considered the play of chance as weaker than did the group of students of other European universities.

Table 2 shows a comparison of the results of the Warsaw University of Physical Education students from selected faculties and the Podkarpacki region students (Penar-Zadarko et al., 2009). The PE students from both research groups significantly varied with regard to the perceived impact of powerful others ($t=4.566$; $p <.001$; $d=.58$) and the play of chance ($t=3.653$; $p <.001$; $d=.47$). No significant differences were observed for the internal control scale ($t=0.088$; $p <.05$). The Warsaw University of Physical Education students were less convinced that their health depends on the action of others and chance.

The results of the students of the tourism and recreation faculty of Warsaw University of Physical Education varied significantly from those of the tourism students from Podkarpacki region on the powerful others sub-scale ($t=3.908$; $p <.001$; $d=.68$) – the Warsaw students reached lower scores. For the chance scale differences remained on the level of tendency ($t=1.766; .05 < p <.1$; $d=.31$) and here also the results of the Warsaw students were lower. No significant differences were observed for the internal control scale ($t=0.061$; $p >.05$).

The research by Penar-Zadarko et al. (2009) did not include physiotherapy students and the physiotherapy students' results from Warsaw University of Physical Education were compared with the nursing faculty students. Since nursing is essentially about direct care over patients of both genders, it was considered more similar to physiotherapy than obstetrics. The physiotherapy students varied from

Table 2. Multidimensional Health Locus of Control Scale scores (M±SD) of three faculties of J.P. University of Physical Education (UPE) students and comparative groups

Variable	UPE: physical education (n=96)	UPE: tourism and recreation (n=74)	UPE: physiotherapy (n=71)	Physical education[a] (n=167)	Tourism[a] (n=61)	Nursing[a] (n=183)
Internal control	27.65±4.744	27.96±3.873	27.85±4.098	27.5±4.3	28.0±3.6	26.2±4.9
Powerful others	16.95±5.067	15.85±4.948	16.32±4.591	20.0±5.3	19.5±5.9	19.55±5.4
Chance	16.05±5.153	18.20±5.102	16.14±4.609	18.6±5.6	19.8±5.4	18.6±5.7

[a] Penar-Zadarko, Zadarko, Binkowska-Bury & Januszewicz (2009)

the nursing students in al the three subscales of MHLC: they presented a lower belief in the impact of others ($t=4.386$; $p <.001$; $d=.61$) and the play of chance ($t=3.245$; $p <.01$; $d=.45$). They were also more convinced that their health depended on their own actions ($t=2.515$; $p <.05$; $d=.35$).

An additional aim of the research was also to define the frequency of appearance of specific types of HLC. Following the suggestion of the authors of the original MHLC version it was established on the basis of a median for each of the three locus of control dimensions. Results are presented in Table 3.

Table 3. Type of health locus of control of University of Physical Education (UPE) students

HLC type	%
I – strong internal	18%
II – strong external	13%
III – diminishing powerful others	13%
IV – increasing powerful others	9%
V –diminishing chance	15%
VI – increasing chance	12%
VII – undifferentiated strong	13%
VIII – undifferentiated weak	7%

The results of the Warsaw University of Physical Education students were heterogeneous. The most represented is the strong internal control type and the group of students who did not perceive chance as a determinant of health. The least represented group is a weak undifferentiated type and those who see the importance of powerful others.

Discussion

Since the HLC construct determines health-related behaviour, it is essential both for the health of an individual and society. Research results show that the students of J. Pilsudski University of Physical Education in Warsaw present a moderate level of belief in personal control over their health. This conclusion derives from the comparison of our research data with the data collected among other European university students and from the observation that the most numerous group of the investigated students of Warsaw University of Physical Education were those

representing the strong internal control type. The participants in our study did not perceive chance as an important determinant of their health. Their scores for this MHLC subscale were lower than the scores of other European university students while the second most numerous group of our respondents were those who undermined the role of chance. In the case of the medical faculy students the most common was a strong undifferentiated type (Naszydłowska, Kozieł, Trwaczyńska, 2003). Both the theoretical premises and results of the research reported in this paper allow to claim that internal HLC is more health-beneficial when it is accompanied by more autonomy in taking decisions, a stronger feeling of personal responsibility for one's own health, drive to improve one's own health and greater involvement in pro-health actions.

The existing body of research on the relationship between HLC and health-related behaviour includes extremely relevant research by Steptoe and Wardle (2001).The importance of this research comes from the exceptionally high number of participants (4358 women and 2757 men, all university students aged 18–30 from 18 European countries), vast number of health-related behaviours (physical exercise, smoking, alcohol consumption, eating breakfast, teeth-brushing, seat belts use, eating fruit, consumption of fibre, salt and fat), including the health value as an associated variable and applying advanced statistical methods of analysis.

This research shows that for individuals in the highest quartile of internal locus of control, the odds of undertaking five of ten selected health behaviours (namely physical exercise, eating breakfast, teeth-brushing, fibre consumption, limiting consumption of salt and fat) was by 40–70% higher than in the case of the students in the lower quartile. High scores in the chance scale were associated with 20–35% likelihood of six healthy behaviours (smoking, alcohol consumption, eating breakfast, consuming fruit and fibre, avoiding fat). High powerful others scores were associated with less coherent healthy behaviour. They reduced alcohol consumption and increased fruit consumption, but they were also associated with reduced physical activity, lower teeth-brushing and safety belts use and increased salt use.

Steptoe and Wardle (2001) claimed that internal health locus of control influenced more behaviours undertaken directly in order to maintain health (reducing fat consumption, brushing teeth, fibre consumption) than behaviours which were determined by factors not directly controlled by the individual (physical exercise, smoking, alcohol consumption). High scores in the chance scale were negatively associated with healthy behaviour (health diet) and positively associated with health-risk behaviours (smoking, alcohol consumption, not using safety belts). These hypotheses were only partially supported by the research evidence.

Only a small number of the Warsaw University of Physical Education students believe that their health depends on powerful others, especially medical staff members. Their powerful others scale scores were the lowest among the compared groups. It may be the result of their (and other Polish patients') mistrust towards the public health system, insufficient access to medical services (especially in the case of more specific treatments) and the belief that their quality is low. In the case when appointments must be made sometimes several months ahead, mistrust towards the real impact of medical staff on the health of the individual may reduce the level of frustration and be a defence mechanism. With regard to this dimension of locus of control, the students of Warsaw University of Physical Education differ also from the Podkarpacki region students from similar study faculties (Penar-Zadarko et al., 2009). This may undermine the above explanation of the results. It may be that the low powerful other scores are more the result of study curricula and attitude formation through one's own internship experiences and relationships with university staff.

Internal locus of control facilitates undertaking healthy behaviours and is associated with a stronger belief in personal responsibility over one's health. It seems to be especially important for the professionals soon to be dealing with health promotion, maintenance and treatment, i.e. PE teachers, physical recreation instructors and physiotherapists. The Warsaw University of Physical Education students represent health related beliefs which may be beneficial for the efficiency of their future professional career.

Conclusions from the presented research are limited to one Polish university of physical education. It does not enable to extend research conclusions to all the Polish population of PE, tourism and recreation and physiotherapy students. Further research on students from other Polish universities would allow to find out whether the homogeneity of the group with regard to HLC is more the result of studying at one university or it comes from the similar character of faculties. Comparisons with the research data of Penar-Zadarko et al. (2009) show that greater differences appear for students of the same faculties but from different universities than for students from various faculties within one university. This issue certainly requires more research on a bigger and more representative sample of students of PE and health-related faculties.

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Social Work

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A Symbolic Interactionism Perspective in the Social Rehabilitation Theory and Clinical Social Work

Abstract

The interactionist approach to deviance is summarized drawing heavily on Blumer's conception of continual self-indication and Becker's examination of the socialization of deviants. The concepts of the self, the definition of the situation, significance, reciprocity and interaction constitute an idea of a human being who is best defined by such terms as homo reciprocus (man in interaction), homo symbolicus (symbolic man), homo faber (man the maker) and homo aestimans (man who evaluates). Symbolic interactionism is used to guide professional assessment and intervention by human services professionals. Correction officers, social workers, counselors, street workers, therapists are positions that would apply the ideas presented in the article.

Key words: *symbolic interactionism, clinical social work, social maladjustment*

Introduction

A theoretical trend of symbolic interactionism (Mead, 1934, Blumer, 1969, Lyman, 1988, Stryker, 2002, Hałas 2001, 2006) has called into question the meaning of such concepts as needs, traumatic experiences or intrapsychic conflicts in the explanation of subjective behavior. Instead, it has established a concept apparatus that in a completely different way determines the source of social and individual actions. The concept of the self, the definition of the situation, significance, reciprocity and interactions constitute a conception of man who is best defined by such terms as *homo reciprocus* (man in interaction), *homo symbolicus* (symbolic man),

homo faber (man the maker) and *homo aestimans* (man who evaluates) (Hałas 2001, pp. 39–48). According to this theory, the behavior of a social subject, i.e. taking a stance on any perceived objects (artifacts, other people, social duties, the self as a specific object of self-reference, etc.) is determined by concepts which are attributed to particular objects in the process of signification (concept formation). Thus, these concepts are the key to the understanding of social and individual actions. The process of concept formation is an initial process defining human behavior. However, as symbolic interactionists remark, the concept is not included in objects themselves. The concept does not emanate from these objects, it is neither a psychological supplement to an object nor a subjective expression of the mind. The concept comes into being in an interaction between people (Hałas 2001, pp. 42–43). Hence, from the perspective of symbolic interactionism, the processes of upbringing and social work may be perceived as a particularly important kind of social interactions that, if properly planned, decide about the stocks of activated concepts and social actions of social service clients. An attitude towards work, education, other people, law, or public property, does not result from the concept that is immanent for these objects, which does not mean that these objects are deprived of such concepts, but it results from the processes of interpersonal defining of those objects. People are symbolic creatures (*homo symbolicus*), for whom objects and concepts (*signifié*) become different signs (*signifian*t). Therefore, human behavior is often conditioned not by objective facts that result from a particular social situation, but by concepts that people attribute to those facts (Lynch, McConatha, 2006, p. 89).

The meaning of a given element, object depends, among other things, on the context in which it is being considered. In such a way, Gestalt psychologists explain the difference of the sense of an element depending on its placement in the whole (in the context). For example, a segment of the same length has a different sense if it constitutes a side of a triangle and different if it is a side of a square. A bamboo stick has a different significance for an ape if it lies aimlessly in a cage and different if it is included in the whole situation and is used by the ape as a tool to achieve an aim (Tomaszewski, 1998, p. 124). For a criminal, fair work is 'naivety', an activity that should be avoided. For Marxist proletarians work was a form of alienation, for others it has ennobling, pragmatic, developmental or preventive values, etc.

Hałas notices that a human being mostly acts manipulating objects to achieve their own aims (*homo faber*). Concepts have a pragmatic nature since human actions are their consequences (Hałas, 2001, pp. 44–45). If a thief realizes that his skills bring a substantial income, it will be difficult to persuade him that it is not worth taking advantage of the dexterity of his hands and proficiency in the use of

certain tools to break down barriers protecting the property of others. However, one's abilities (in the case of a thief, a proficiency in breaking down barriers, e.g. in unlocking) can be used either for illegal actions (the only perspective a thief sees to use his own abilities), or legal actions (I have personally heard of a former thief who has registered his business and currently provides services to those who locked their keys at home or in a car; his service is much cheaper than breaking a window or extracting a door). *Homo aestimans* assesses and evaluates his world. That former thief assesses his abilities in a similar way as before, however he has changed the definition of the self and others from perceiving himself as a thief and others as 'patsies' (who were to blame for wrong protection of their properties and allowed for being robbed) to a service provider and clients. He considered (evaluated) such a change more beneficial. The pragmatism of an action is a vital factor determining daily choices of social actors.

A human being is not a medium for factors affecting him (determinants) but a subject actively constructing their actions (the self). There are situations in which the self gives in, succumbs to an action of a determinant, however it does not happen without its will but in the process of interpretation where the self deems that a particular need, a definite social requirement must be met now and in a specific way. Jenks (2005, p. 56) realizes that symbolic interactionism refers to individual actors, however not to an individual in isolation, since symbolic interactionism is a sociological not a psychological theory. It concentrates on individual units indeed, but in relations with others in the process of interaction as well as united in an intersubjective network of meanings. Individuals often use this intersubjective network of meanings, they are not forced to construct meanings continuously and individually, but they can adopt the given ones, which they often do using meanings common in the community. Symbolic interactionism indicates the significance of a volitional apparatus as the last instance of undertaken social actions and an act of interpretation as a primary causative factor of human behavior. The theorems of symbolic interactionism significantly enrich the studies of deviant behavior. Even the expression of such it would seem a biological (physiological) need as a sexual drive can be explained in the concept categories of symbolic interactionism. Gecas and Libby notice that "sexual symbolism also creates sexual experience" (1976, p. 34). It can even be said that it is not libido that shapes fantasy (especially male one), but it is the fantasy that shapes libido, whereas stimuli that arouse a desire between a woman and a man have more symbolic than physiological nature. A sexual experience as well as a clash of expectations related to the kind of expected love experience depend on possessed cognitive models accompanying a sexual relation (a female focus on romanticism, a male focus on leisure, love textbooks

beginning with Christian ones, Romantic ones and sexual revolution exposing various approaches to sexuality) (Gecas, Libby, 1976).

Symbolic interactionism in the analyses of deviant behaviour

The idea of a good life and the ideals of juvenile delinquents can be reduced to a desire of immediate pleasure that may be derived 'here and now'. It is a life strategy that B. Suchodolski called 'living for the moment'. Life is defined as a streak of present moments and one should get the most out of them since all life opportunities and charms are incorporated in those moments. It is the life for passions which have to be fulfilled almost immediately (Suchodolski, 1983, pp. 99–107). In this strategy of life future is not considered as important. Modern society requires thinking about the future and planning it. The future is a target that should be indicated and considered a vital life category. Blumer (1969) realizes that whatever a human being is conscious of has been indicated by them. A conscious life of a human being, from awakening till going to bed, is a continuous stream of indicating oneself, noticing objects that one deals with and considers. Such a theoretical perspective explaining human behavior immensely enriches the methodological aspect of thinking about the change of life priorities for persons socially or morally depraved. Everyone who in their practice of social (pedagogic) work has entered into any contract with a tutee knows how important it is to indicate the vital aspects of life and tasks to fulfill in order to obtain crucial changes in the way of life of those clients. We are symbolic creatures (*homo symbolicus*) because we indicate objects to ourselves and denote them (interpret).

The question why a deviant behaves in a different way than a person considered as a conformist seems to remain fundamental in our reflections. If a deviant behaves in a reprehensible way towards other people and breaks social rules, e.g. reacting in a vulgar way once accidentally pushed by a stranger in a crowd, it suggests at least two phenomena. The first one applies to all of us and results from the fact that none of us feels well while, even accidentally, experiencing such a push. Another phenomenon is the reaction to this incident. It is claimed that adapted man, well-brought up, will wait for an apology in order to reply that nothing has happened or in the case he does not receive an apology, he will regard that person as somebody ill-mannered, who should be pitied. Another reaction, e.g. insulting the guilty party or taking even more dramatic steps, makes us pose a question about the causes of these different reactions. Whereas the first phenomenon has features of an unconditional reaction, the other one (the possibility of reacting in various

ways) suggests that something else has occurred between the stimulus (a push) and the reaction, something that has decided against a polite or vulgar behavior. For an interactionist, these decisive factors include the self of a reacting human being and an interpretation of a particular situation used by that person. Obviously, it may be claimed that beyond these different social reactions there are acquired patterns of general behavior, i.e. simply an attitude. In the first case, it is a model (an attitude) of a friendly reaction, by way of compromise, in the other one, a hostile and violent reaction to an incident. Thereby, the causes of such behavior depend on the nervous system, character, personality, etc. Symbolic interactionism, however, in these various social actions notices different ways of assigning significance to phenomena of the outside world. In the first case, the well-brought up actor takes a stock of interpretative models, on the basis of which he is willing to justify such incidents. The world is friendly to him and ordered. If any incidents happen, the disturbed order should be soon restored.

The second actor ascribes hostile intentions to the world and he interprets such events as, e.g., a push, as a provocation. Plausibly, he had already been pushed several times before and the guilty parties had explicitly shown him then their disrespect for him, the feeling of their superiority or an invitation to a confrontation. It may be realized in the situation analyzed above that different human actions are possible in the same circumstances. However, only one reaction is socially expected in that particular situation. Someone pushing someone else should apologize to them, and the apology should be accepted. A person socially maladjusted either does not have such a knowledge (so they cannot interpret that situation in a proper way) or, which is much more common, they assign a different significance to that situation. It may be said that a socially maladjusted person defines the situation without respecting commonly acceptable social rules. Thus, an opportunity to steal, abuse somebody weaker, avoid school duty becomes a chance for a social deviant, which he willingly takes advantage of, whereas for other people, those socially well-adapted, it is either a temptation that must be overcome or a possibility that will never be used. If a socially maladjusted child notices a wallet left through inattention, he will not consider long whether he can appropriate it. The child would feel 'a pang of conscience' (would feel guilty) if he did not do that. Simply such a definition of this situation activates in his mind; a wallet activates a significance of money and potential benefits that the child can derive from it (the child will boast among his peers that he has 'cash', will buy necessary things, 'will buy himself' a temporary approval and respect of the community). The mind of a socially well-adapted child will activate a reverse model of interpretation in such a situation. This model demands that he will restrain a natural inclination to ill-gotten gains

since the money belongs to somebody else, so regardless of potential benefits that the profit could bring, the child is aware of the fact that it would be theft. Even if the child succumbed to temptation, he would feel pangs of conscience. The feeling of guilt would make the child give the wallet back. Socially maladjusted people have a set of definitions of situations which is different from that of the rest of society making and obeying socially adopted rules. People mostly respect specific values and comply with socially adopted rules neither because in a natural way they feel the moral responsibility nor because they have a general inclination to appropriate or inappropriate conduct; rather they do so because other people have made them aware (or not) of the significance of those values and rules. Upbringing, understood here as an intentional transmission of specific definitions of situations and not always intentional organization of the living environment, is the creation of a human being.

Conducting research in the 1940s into marihuana smokers and entertainment musicians, Becker (1963) noticed that the members of these communities were considered deviants not because some previous deviant motivation, negative inclination had generated in them, which made them break social rules adopted by a statistic majority of citizens. They became deviants for society just because of the society itself. They were labeled deviants, on the one hand, due to the fact that some part of society quite arbitrarily considered them deviants, as these phenomena for some time had not caused any outrage (relativism of standards), but on the other hand, another part of society provided them with specific definitions of situations in the process of socialization, which standardized their deviant lifestyle for them. These are the people who want to listen to music in nightclubs, who create a group of night musicians who neglect their own family life carrying out unconventional lifestyle. Similarly, an initial experience of smoking marihuana is almost never positive since it rarely brings desired biological reactions at once and it more often evokes a state of anxiety. It is other people (other deviants) who teach subsequent smokers in which way the action of smoking (not a value then or a forbidden action), which at the beginning arouses only curiosity or even negative experiences, is redefined into a desirable action (now a value). Becker proved that after the first experience nobody would smoke any more if they did not redefine their impressions considering the effects of marijuana as enjoyable.

These examples indicate how far-reaching consequences may be brought by interpersonal interactions, definitions of situations used by others or activated significance, finally social relationships that people establish, especially children and teenagers who are most susceptible to socializing effects. Becker's research shows another vital feature of deviation, namely the relativity of criteria of its

assessment. Something that for somebody is already an obvious violation of a social norm, for others is still within the range of conventional behavior. Commenting on the social reaction theory (*labeling theory*), Danuta Urbaniak-Zając states that 'the same event perceived from the perspective of one participant and, e.g., from the perspective of a correction officer who is responsible for looking after this particular participant, may be interpreted and defined differently by them. The possibility to acknowledge a given definition of the situation as valid depends on the social position of the person who defines. A juvenile delinquent has poor chances to persuade the correction officer that he was a participant of a social gathering and not a booze-up, as the correction officer asserts' (Urbaniak-Zając, 2003, p. 128).

The diversity of social groups, multiple cultures, socializing circles and the mind's ability to absorb new concepts constitute a primary source of human behavior pluralism. It should be remarked that the mind of an individual is not only shaped by communities, cultures, religions or family traditions, but also by another man. "The social stock of knowledge" (Keller, 2011, p. 44) that conditions the behavior of the individual may be an effect of an interaction with only one person, who turned out to exert a key impact on the personality and Weltanschauung of that individual. Psychoanalysts perceive especially the father as this influential person since the emergence of superego originates with the identification with him. Counselors highlight the significance of the mother, who develops the most basic life expectations in her child and satisfies the child's primary needs. Sociologists talk about "significant other" and publicists about authorities.

Thus, since such creative power is embedded in "intersubjectivity" (Siebold, 2011), it should be used by counselors (social workers), who due to the nature of their work have to 'construct' another person in a planned and intentional way and take responsibility for them within various aspects of their educational practice (intervention). Self-change, in fact, is anticipated as the nature of important social relationships shifts; personal order and personal change are aspects of a larger social process (Meddin, 1982, p. 154, Stryker 2002, p. 216).

According to P. Zimbardo, people whom he has met during his life have exerted the greatest impact on his life and career. 'The reason why I have become successful [he recollects in an interview with Victor Osiatyński Zimbardo – added by M.B.] and my brother not, is not because of the difference of personalities but due to the fact that I had different teachers and friends, I have been in other situations, etc. The conditions made me focus on the future and my friends taught me how to plan. I kept thinking what my life might look like. And it helped. My brother was more oriented to the present. He could live for the moment and enjoy it but he could not change his life' (Osiatyński, 1980, p. 195). It is hard not to appreciate the influence

of conversations with unique people in our life. Similarly, the significance of role models exerts a vital impact on the rehabilitation of tutees (*correctional treatment*).

Even the presence of a counselor among tutees (clients/patients) is a correctional method. The counselor with his physical presence brings in his own social stock of knowledge, his own interpretations and, above all, his own attitudes towards a tutee (client/patient), which has an influence on social experience and the significant resources activated by the tutee. Obviously, it must be constructive presence which, planned adequately and intentionally, becomes *constructive upbringing presence*. A negative world image that induces a tutee to a negative attitude towards the environment comes not only from opinions which he has encountered in his own environment (interpretations conveyed by means of symbolic communication of significance), but mostly from frustration experiences with people who are close to him and destructive values that these people share. Especially these negative experiences make him define the world in a way that enables him to break social norms. Hence, constructive presence should concentrate not only on the cognitive reconstruction of the tutee's consciousness, but also on the fulfillment of his needs and the creation of new normative orientations, which activates a desired significance and as a result, a positive social action. In such a way, more and more outside world referents gain positive significance, which consequently activates proper social behavior. Thus, the tutee, even subconsciously, adopts the counselor's world of values and significance. The method of constructive presence acts on two levels. On the one hand, it activates the processes of identification with a role model, modeling, copying or imitating. On the other hand, it allows for an indirect upbringing, using Brezinka's terminology, the upbringing that 'assumes that counselors try to acquire features, thanks to which children, students and tutees can feel that their relationship with counselors is something enjoyable and not sad. Adherence to normative points of reference [significance and interpretations of the situation – added M. B.] originates in childhood and adolescence, usually due to love to people who are close to that person and who value these points of reference. However, an aversion to a counselor who is hostile, does not have enough knowledge or abilities and who has lost his authority, may cause emotional rejection of the »values« [significance – added by M.B.] that the counselor holds' (Brezinka, 2008, pp. 36–37).

A good counselor saves the authority of an adult since among maladjusted children this authority has degraded. An adult should invoke associations with responsibility, safety, initiative, however, often these associations are reverse. It is important that the adult activates a desired significance since the child needs support and the feeling of dependence in order to properly go through the period of

childhood. Graniger points out rightly that in a family in which the relationships are disturbed there are no bonds or constructive rules of functioning, children have a problem to construct the authority of a parent and thus they rebel against their parents, disrespect them, demonstrate a flippant attitude towards their parents' laws and power. Thus, the counselors' task is to save the authority of an adult whom one may trust (2006, p. 119).

Conclusion

Words have a performing dimension. Interpretations (definitions of situations) that we use in diverse social situations activate social actions. One of the most important interpretations for our performance is the one in which we do not refer ourselves to objects of the outside world labeling particular meanings to them, but we become such an object to which the outside world attaches significance. The sense of social rehabilitation is within the assumption that it is possible to redefine the self of a socially maladjusted person. It depends on the environment which the tutee uses as a primary narration recalled in occurring social situations. "Meaning occurs through social interactions, and new meanings are managed or modified through such interactions. Mead further asserts that the development of a self is a reflective process. The self is constructed based on what others tell us about ourselves, our perceptions of what others say about us, and the internalization of those perceptions […] Change in meaning is related to the social context in which alternative meanings are being offered. Clinical social work has favored an interactionist perspective as a basic tenet of practice" (Siebold, 2011). The above theoretical analysis indicates that in social work methods (rehabilitation) it is very important to praise the tutee's traits disclosed in upbringing situations which may constitute a constructive element of their self; the element (one's resources) that they will recall while making life decisions. A counselor, as a significant other, is able to instill principles into his tutees, the ideas of how one can and should take social actions in accordance with social standards.

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Chosen

Aspects

of Psychology

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Gender Schemas and Stress-Coping Styles

Abstract

This article reports on the findings of a study on the empirical verification of the hypothesis regarding a stronger impact of gender over sex on coping with stressful situations. Gender has been operationalized into S. Bem's gender schemas. Multiple regression analysis confirmed the hypothesis for the three measured styles of coping with stress.

Key words: *sex, gender schemas, stress-coping styles, education.*

Hypothesis

Coping with stress is one of the indicators of the proper functioning of women and men in social situations. Outside of academia, in the cultural discourse of everyday life, we can identify a stereotype which states that women have a greater difficulty than men in tackling problems that arise from the heavy burdens associated with stress. Or the other way round, that men are better at overcoming stress. This stereotype has been corroborated by research conducted in preparation of the Polish adaptation of the test 'Coping with Stressful Situations' (J. Strelau, A. Jaworoska, K. Wrześniewski, P. Szczepaniak, 2009). Out of four styles of coping with stressful situations, this test distinguishes one functional style – task-oriented, as well as three non-functional styles – emotion-oriented and avoidance-oriented (in two versions). In comparison with men, women in different age groups systematically scored higher-level indicators of non-functional styles (J. Strelau, A. Jaworoska, K. Wrzesniewski, P. Szczepaniak, 2009, p. 56). Thus the stereotype that women react either emotionally by fleeing is reinforced. However, since this data does not reveal intersexual differences in the range of task-orientated style indicators,

it is no simple matter. The question arises concerning the inner structure of the sample of women, which conceals within itself some criterion responsible for the ambiguity. We do not know, however, what sort of criterion this is. The presented article is an attempt to test one of the possibilities, namely the gender schema (Bem 1981, 1983) – a construct referring not to the biological, but to the cultural bases for male and female behavior. We shall be checking what happens in the space of the variable 'coping with stress', if we add to it the criterion variables: sex, and gender. Which of these two variables will explain a higher percentage of variance for 'coping with stress'?

What is the theoretical context of our study? It is constituted by N.S. Endler and J.D.A. Parker's concept, called the interactionist model of coping with stress (1994), as well as S.L. Bem's concept of gender schemas (1984). Generally, there are three approaches to the study of stress-response: an approach focused on strategy, one focused on process, and one on style. A stressful situation can be conceptualized either as objective or subjective. There is a list of stressing stimuli, so-called stressors, which work universally with regard to areas of human life and the individual's place vis-a-vis nature, society, and culture. Apart from that, the assessment of the degree of impact stressors have is dependent on the attitudes and personal resources of those experiencing stress. Over the years, and with the increase in research on stress, the objective conceptualization of the problem has been losing its explanatory value in favor of subjective conceptualization. Nevertheless, researchers have not completely lost sight of the aspect of objectivity, despite its being marginalized. All of the above-mentioned approaches respect this dual nature of stressful situations. The approach which defines coping with stress as a strategy emphasises the individual's diverse and changing ways of acting when confronted with a stressful stimulus. There is a similar case for the process formulation, which speaks of the sequence of strategies. On the other hand, in the approach which defines coping with stress in categories of style, the latter is treated as a relatively permanent disposition. J. Strelau et al. (2009, p. 9) reckon that styles describe the subject well. At the same time, situations, being sources of a perceived threat, are described well by strategies and processes. Based on Endler and Parker's theories, we can say that how individuals behave with regard to stressful situations results from the interaction between their personal styles of stress-response and what the situation requires. Thus, when we talk about coping with stress, we will bear in mind the individual's specific, conscious style of acting in varied situations of the encoded stress stimulus (Endler, Parker 1994, pp. 50–54). During the operationalization of the construct thus understood, Endler and Parker identified three styles of coping with stress using factor analysis: a task-oriented

style, an emotion-oriented style, and an avoidance-oriented style. The first of these means that the person tested reveals a tendency to undertake tasks, the solution of which might change the stressful situation into an advantageous one. The moment a stressor appears, the subject's attention centers on finding a solution to the problem situation: task – action – result. In the emotion-oriented style, the dominant tendency is to consider and analyze one's own personal experiences induced by the stressful situation in order to reduce the state of psychological discomfort. Often, defense mechanisms, i.e. subconscious behavior strategies, appear within this style. The third style, on the other hand, is opposed to the second style in that it constitutes retreat from thinking, analyzing, and experiencing the situation in emotional categories. It is also, however, avoidance of searching for a solution. The main problem is how to find a 'way out' of the stressful situation.

Looking at the conception under discussion from a broader theoretical perspective, we may notice that the style of coping with stress can be conceptualized using concepts related to the processing of information about ourselves and the outside world. And this means that, despite being individualistic, the coping style is based on cultural patterns in contact with the individual. These patterns are the object of cognitive operations, especially those that are described by the concept of cognitive schemas (cf. Marcus, 1997). This structure organizing the perception of different dimensions may also account for the interactions between an individual's resources and the characteristics of a difficult situation, the situation being the basis for the stress-coping style. And if now we invoke S. L. Bem's concept, we notice that one of the dimensions due to which the cognitive schema can process information is the femininity – masculinity dimension. Therefore, there is at least a theoretical affinity between Eldner and Parker's as well as Bem's conceptions, for it is possible that the dimensions of femininity – masculinity can take part in the formation of the stress-coping style. Let us take a look at what, in this context, S.L. Bem's conception offers. The gender schema is built on cultural patterns of femininity and masculinity. From the earliest age, human beings have created definitions of both sexes, which have begun to perform the function of criteria for acquiring, selecting and organizing behavior. Bem argues that cognitive schemas saturate one's self-image with content derived from cultural patters of femininity and masculinity, which directly accounts for the phenomenon of gender typification, assuming these patterns are consistent with the individual's biological sex or the opposite sex (Bem, 1985 p. 184). If, however, the cognitive schemas do not favor any of the gender patterns, yet to an equal degree they make use of both, or do not make use of them at all, then there is no gender typification. With this distinction, Bem derives four variables defined as gender schemas: a sex-typed schema, a cross sex-typed schema,

an undifferentiated schema, as well as an androgynous schema. The first of these describes feminine women and masculine men, and therefore individuals who process information based on stereotypes attached to their sex. The second schema describes masculine women and feminine men who process information based on stereotypes of the opposite sex. The third schema describes men and women with an indeterminate gender, characterized by processing information based on attributes of a non-cultural definition of sex. The fourth schema – the androgynous schema, describes individuals who process information about themselves with the help of the cultural attributes of both sexes equally (Bem, 1981 pp. 357–360).

The juxtaposition of these two concepts allows us to theoretically secure the hypothesis of the study presented in this article. The first premise for the formulation of our hypothesis is the fact that in the research by Strelau et al. (2009, p. 56) women scored higher-level indicators than men for emotion-oriented and avoidance-oriented coping styles. This is consistent with the cultural patterns of femininity and masculinity. However, incompatible with these patterns are the results which do not show intersexual differences for the task-oriented style (cf. Bakan, 1966). The second premise is Bem's claim that gender schemas are cognitive schemas that take part in the processing of information about the world, and thus also about stressful situations. Finally, the third premise comes from Endler and Parker's conception situating stress-coping styles not in the context of biological dispositions, as was the case with objective formulations of stress, but rather in personal resources, associated with socio-cultural competence. Therefore, if we insert stress-coping styles into the multiple linear regression model as a dependent variable, while sex and the four gender schemas are placed on the side of the independent variable, then the gender schemas will explain a higher percentage of the variation of each of the stress-coping styles. Presumably, the androgynous schema will have a greater beta weight than sex and the remaining schemas in the equation for the task-oriented style. At least such a conclusion is plausible given the theoretical premises above.

Method

This study was conducted using the quantitative strategy approach, in the correlational scheme and was of the theoretical-verifying type. The samples were selected randomly, data was collected using the paper and pencil testing method. Verification of the hypothesis required the use of linear regression equations with the beta weights of independent variables (sex and gender schemas), which will

show what percentage of the variation of the stress-coping style these variables can explain.

The questionnaire, Radzenie Sobie w Sytuacjach Stresowych (Coping in Stressful Situations) (CISS), developed by J. Strelau, A. Jaworowska, K. Wrzesniewski, P. Szczepanik (2009), was used to measure the dependent variable. This is the Polish adaptation of Endler and Parker's (CISS) test (1990). The Polish version diagnoses four styles of coping with stress: SSZ – a task-oriented style, SSE – an emotion-oriented style, and SSU – an avoidance-oriented style that breaks up into two subtypes: ACZ – engaging oneself in alternative activities, and PKT – looking for social contact (Strelau et al. 2009, p. 17). The original questionnaire, CISS, has three scales. However, the Polish adaptation of the third factor, SSU, was not homogeneous and was divided into two factors. Ultimately, one can calculate the results either for the entire SSU factor, or for two: the ACZ and PKT. Only three (out of 48) items on the questionnaire had a low discriminatory power and corresponding low factor loadings. Other items met the statistical criteria in this regard. The reliability of the instrument was verified using Cronbach's alpha, calculated for the scales, which came out in the range of 0.73–0.86, and was satisfactory. The theoretical validity was confirmed using factor analysis. CISS was also correlated with the measurements of other variables which should have either a high or low correlation with it, e.g. the maladjustment scale, personality traits, extraversion, neuroticism, lie scale. These criteria were met (Strelau et al., 2009). The instrument is normalized (sten scores) and yields the interval level of measurement.

The Psychological Gender Inventory (Inwentarz Płci Psychologicznej) developed by A. Kuczyńska (1992) was used to measure gender schemas. This is not a Polish adaptation of Bem's Sex Role Inventory (Bem 1974), but an inventory, based on Bem's conception, of adjectives appearing in Poland which are deemed stereotypes associated with the sexes. Therefore, it has two scales: femininity and masculinity. There are also neutral adjectives that nevertheless do not comprise a scale and are not included in any of the scales. After crossing the results of both scales, with respect to men and women, we obtain the indicators of four gender schemas found in S. Bem's conception. The IPP questionnaire includes adjectives whose discriminatory power is in the range 0.23–0.65. Reliability was calculated using the Kuder-Richardson coefficient, which for the masculinity scale is 0.74, and 0.78 for the femininity scale. On the other hand, the validity was assessed by comparing the results of heterosexual students with those of transsexual students. As an indicator of validity we acknowledged the fact that the results from transsexuals of the woman/man type were more akin to the results of men than of women. The questionnaire was normalized with the help of the mean and standard deviation

(Kuczyńska 1992, pp. 18–24). In calculating the results one can specify an indicator for each of the four gender schemas.

The study was conducted using a sample of 123 part-time university students between the ages of 23 and 52 (the average age was 32), among whom 46 were men and 77 were women.

Results and Discussion

The first issue requiring interpretation is the lower beta weights of sex versus the androgynous scheme. Even in the case of the emotion-oriented style, sex has a negative weight, which means that men obtained higher results in this scale.

Table 1. Beta weights of regression equations for dependent variables

CISS	OOP	OOK	NP	OA	PB
	normalized beta weights				
SSZ	.16	s.i.	.19	.22	.10
	Rc = 0.49 p<0.05; % explained variance (Rc²) = 24				
SSE	.38	s.i.	.55	−.49	−.13
	Rc = 0.67 p<0.05; % explained variance (Rc²) = 45				
SSU	.40	.18	.24	−.63	.26
	Rc = 0.71 p<0.05; % explained variance (Rc²) = 51				

Key:
CISS – Scales of "Test Radzenia Sobie w Sytuacjach Stresowych"
OOP – individuals with a definite gender;
OOK. – cross-sex typed individuals;
NP – indefinite individuals;
AO – androgynous individuals;
Rc – adjusted value of the coefficient of multiple regression
s.i. – statistically insignificant
SSZ – task-oriented style
SSE – emotion-oriented style
SSU – avoidance-oriented style

Source: own research.

It turned out, however, that the androgynous schema explains a greater variance of all the styles than being a woman or man in the biological sense. This result indirectly and positively verifies the hypothesis which formerly led researchers to move away from the position of objectivism towards subjectivism in the study of the impact of stressors on human behavior. In addition, the thesis regarding the functionality of

androgyny is strengthened. Certainly enough, androgynous individuals, as in the studies of Bem (1985), Block (1976), Rebecca, Hefner Oleshansky (1976), functioned better when faced with stressful situations than the remaining subjects of the study. Perhaps this ability to perceive the environment in universal terms, rather than in terms limited to merely one sex, broadens the scope of coping with stress. This is especially the case, since individuals who employed the androgynous schema revealed negative indicators with regards to non-functional, and thus emotion-oriented and avoidance-oriented, styles. Thus the question is if, among the women studied by Strelau et al. (2009, p. 56) who scored the same level task-oriented indicators as men, there were any androgynous individuals or perhaps cross-sex typed woman. The table presented above indirectly shows that they were mainly androgynous, since beta for crossed individuals was statistically insignificant. This issue requires repeated testing. In this context, the indicator of sex, which is negative in the equation for the emotion-oriented style, is also striking. What gender schema is responsible for this effect? The logic of cultural patterns suggests that the biological male cross-typed schema might be responsible. This is still well worth examining.

With regard to the task-oriented style, the definite and indefinite schemas have closer beta weights. It is difficult to explain this relationship by referring only to cultural patterns. Individuals with indefinite genders make use of different criteria than definite individuals when processing information, e.g. about a stressful situation and about themselves. After all, we cannot claim that only cultural patterns of sex offer constructive ways to overcome stress. It could be that these functions are carried out by patterns of psychological health, worldviews, past experiences, etc. In any case, the equation for the task-oriented style, in the slightest degree is sex. Besides, sex has the lowest beta weights in all of the equations, which – regardless of the direction of impact – shows that it explains the variation in stress-coping styles to the smallest extent. Even looking at this problem from an evolutionary perspective it is hard to find an argument reinforcing the notion that evolution better equips one of the sexes with resources necessary for overcoming stress. Even from the position of objectivity in defining a stressful situation, we cannot unequivocally say that men face bigger stressors than women, because both sexes have to rely on the impact of the same natural forces, and are in the same way helpless against them (e.g., earthquakes, storms). Furthermore, establishing a list of life situations typical of both sexes, it is difficult to assign a more stressful character to male situations over so-called female situations. For these reasons, differentiating stress-coping styles according to the criteria for sex seems ineffective, not to mention the ineffectiveness of constructivist interpretations that place a strong emphasis on the subjective – dependent on the individual – vision of social action.

Turning to the equation for the emotion-oriented style, we can see that in addition to sex and the androgynous schema, the lowest (of the positive) beta weights belongs to the definite schema. This may mean that these individuals succumb in the smallest degree to this ineffective style. The largest beta weight can be found in the indefinite gender schema. This relationship can probably be interpreted by reference to models other than those cultural models of criteria for self-assessment and stressful situations; however, the results of our study do not show which ones. They do show, however – as already mentioned – the negative weight of sex, similarly to the androgynous schema. It is nevertheless low, because sex has a 10% influence on the style of action under stress, whereas, the androgynous schema has a 49% influence. And analogously, as with the task-oriented style, androgyny can be associated with the functionality of acting in the presence of stress.

In the last equation the androgynous schema has a very strong negative weight, which means that to a small degree it determines avoidance as a stress-coping style. Individuals with a definite gender schema most strongly reinforce this style, so also included here are masculine men, which is not consistent with predictions derived from sex stereotypes. For the first time in this equation a statistically significant beta weight appeared alongside the definite cross-sex typed schema. This is a positive weight, low in total, similar to the indefinite schema weight and significantly weaker than the definite schema weight. Perhaps the significance of this weight carries some meaning for the avoidance-oriented style. It is difficult, however, to find support for this looking at the data in Table 1. It is a pity that this equation is the least clear when it comes to giving an interpretation, because it is in this equation that the independent variables together explain 51% of the stress-coping style. A similar percentage can be found accompanying the equation for the emotion-oriented style (45%), and the lowest belongs to the equation for task-oriented style, a mere 24%. The lowest percentage of explained variability appeared in the equation that manages to be most fully interpretable, and the highest could be found where a reasonable interpretation was difficult. Thus, we obtained a paradoxical relationship between analytical results and their interpretations.

To conclude the analysis and interpretation of the results it is worth recalling that sex was a weaker predictor of coping with stress than the gender schemas. From amongst the gender schemas, the androgynous schema played the strongest part in the effective styles. The weakest, however, for all of the styles belonged to the definite cross-sex type schema.

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Intelligence and Creativity of Polish Middle-School Students: Looking for the Threshold Hypothesis

Abstract

The presented study is devoted to the examination of the threshold hypothesis (TH), which assumes a curvilinear relation between creative abilities and intelligence. The article focuses on methodological problems, particularly on analytical strategies relevant to confirming or refuting the TH. The TH was tested on more than 100 middle-school students. Intelligence was measured by Raven's Progressive Matrices (RPM) test, and creative abilities by eight divergent production tests measuring fluency and originality of thinking. Different criteria of acceptance / rejection of the TH were applied and discussed. The TH was confirmed when the relation between creative abilities and intelligence under the threshold was greater than zero, while above the threshold it was not different from zero (the so-called A strategy). However, the TH was refuted when differences in the strength of the correlation below and above the assumed threshold of intelligence were compared (B and C strategies).

Keywords: *intelligence, creativity, creative abilities, threshold hypothesis*

Introduction

The threshold hypothesis, formulated in the 1960s (Guilford, 1967; Torrance, 1962), assumes that creativity is positively correlated with intelligence, but only when IQ < 120. Among people with an IQ ≥ 120 the relation between creative abilities and intelligence diminishes or becomes statistically insignificant.

The existence of the threshold hypothesis has important diagnostic and educational consequences. If the TH is true, the creative abilities of people with an IQ < 120 could be estimated on the basis of their outcome in intelligence tests (Nęcka, 2001). However, it is much harder to predict the creativity of people with an IQ above the threshold of 120 points, because (Guilford, 1967; Runco, 2007) this group contains persons of both low and high creative abilities. Torrance (1959 cited in: Russo, 2004, p. 180) notices that "if an intelligence test were used to select top-level talent, 70% of the people with the highest 20% of scores on a battery of creativity tests would be missed". Among the educational consequences, it should be taken into account that the level of students' intelligence may have an impact on the effects of programs that stimulate their creative thinking. The results of Russo's (2004) studies indicate that students with higher intelligence are characterized by higher verbal fluency, while students of average intelligence in elaboration on figural tests. The threshold theory may also be relevant to the procedures for selecting applicants for higher education institutions (Kaufman, 2010) and programs for gifted students (Fuchs-Beauchamp, Karnes, & Johnson, 1993). If the TH is true, the process of selecting students for the various types of ability development programs, besides above-average intelligence, requires a separate diagnosis of their creative abilities.

The results of the studies examining the TH are ambiguous. Some previous studies confirmed TH (Cho et al., 2010; Fuchs-Beauchamp, Karnes, & Johnson, 1993; Guilford, 1967), while others refuted it (Kim, 2005; Runco et al., 2010; Sligh, Conners, & Roskos-Ewoldsen, 2005). The occurrence of the threshold hypothesis depends on many, often subjective, analytical decisions. Meta-analyses by Kim (2005) indicate that the strength of the relation between intelligence and creative abilities varies due to the applied measure of creativity, particularly regarding types of creativity tests (verbal or nonverbal), and the determinants of creativity abilities (fluency, flexibility and originality). The adopted concepts of intelligence and measures of intelligence are also relevant for the relation between these variables. Sligh et al. (2005) demonstrated that the character of the relation between crystallized intelligence (gc) and creative abilities seems to support the TH, yet the relation between fluid intelligence (gf) and creative abilities contradicts it. On the other hand, Cho et al. (2010) concluded that the relation between fluid intelligence (gf) and creative abilities confirms the threshold hypothesis.

The Threshold Hypothesis and the Strategies for Data Analysis

Research on the threshold hypothesis used to use different strategies for data analysis (Karwowski & Gralewski, 2012), described elsewhere as A, B and C. The most common strategy,– called strategy A, is based on a comparison of correlation coefficients between creative abilities and intelligence in the groups below and above the threshold. If the correlation below the threshold of intelligence is higher than 0, while above this threshold it does not differ reliably from 0, it is usually argued that the TH is confirmed. This analytical strategy, however, can lead to erroneous conclusions. The variance of IQ in the group above the threshold is limited, which weakens the correlation coefficient and makes the confidence intervals for *r* cross, making it statistically insignificant, which artificially confirms the TH. In a study by Sligh et al. (2005) in which, by proper selection of the sample, variances below and above the threshold were leveled, the TH was refuted.

Strategy B is much more conservative than strategy A. An additional condition is imposed that the two correlations (below and above the threshold) should differ significantly from each other. This analytical strategy is conservative, and proper testing of the TH requires large samples, especially above the assumed threshold of intelligence.

Strategy C is a more general form of strategy B. It assumes that the correlation between creative abilities and intelligence is statistically significant in the group below the threshold, and that it is stronger than the correlation above the threshold. A correlation above the threshold does not necessarily have to be statistically insignificant. Therefore, strategy C assumes that the relations above the threshold are weaker than above it.

These analytical strategies vary considerably in assumptions about the conditions necessary to confirm the TH and can lead to different conclusions about the validity of this hypothesis. It seems that the most frequently used strategy (A) could lead to unjustified confirmation of the TH, by ignoring the inequality of IQ variance below and above the threshold. This phenomenon, called "heteroskedasticity," can be eliminated by equating the variances of intelligence in the groups below and above the threshold or by an appropriate choice of the sample (Sligh et al., 2005). Another solution is to correct obtained correlation coefficients for restriction range in the groups below and above the threshold (Thorndike, 1949; Wilberg & Sundstrom, 2009). In order to examine the existence of the TH it is also possible to use a regression analysis, especially in its polynomial form (Cohen, Cohen, West, & Aiken, 2003). Furthermore, the appropriate TH test also requires a comparison of the strength of the correlation coefficients below and above the threshold, as

suggested by strategies B and C. Hence, the aim of the study presented below was to examine the existence of the TH in relations between creative abilities and intelligence using different criteria (A, B, C) and analytical strategies.

Method

Participants
In total, 104 middle-school students – 54 male (52%) and 50 female (48%) – participated in the study. All of them were 14–15 years of age and attended a Warsaw middle school. Participation in the study was anonymous and voluntary, and the participants were not rewarded for their participation.

Measures
DT tests. Creative thinking was measured by two tests of divergent thinking. The first was about providing unusual uses for four ordinary objects (a brick, a newspaper, a button and a paper clip). The second was about providing the largest possible number of associations with four drawn figures (three triangles, a wavy line, two inscribed rectangles, and ovals). Responses to each of the tasks were rated for fluency (number of responses) and originality (uniqueness of ideas). The participants had three minutes to perform each task.

Intelligence. Intelligence was measured by Raven's Progressive Matrices (RPM) test (Raven, Raven, & Court, 2003), in its Polish adaptation (Jaworowska & Szustrowa, 2000). The reliability of the RPM was high (Cronbach's α = .84). The raw scores of RPM were also recalculated as IQ scores, based on available norms from a study of Central Examination Commission – an educational added value team (http://ewd.edu.pl/badania-gimnazja/). In general, the students from our sample were slightly more intelligent ($M = 45.58$, $SD = 5.98$) than their average peers from a representative Polish sample ($M = 44.91$, $SD = 7.66$). The IQ scores were calculated for a normalisation sample, using a well-known formula (100+15 x standardized raw score) and then our sample IQ scores were recalculated.

Procedure
The tests were completed individually in two group administration sessions, lasting 45 minutes each. The tests were administered in a counterbalanced order.

Data analysis
The data analysis was made in four steps. In the first one, the inter-correlation

between the DT tests was calculated. Then scales of DT tests were factor analyzed using the maximum likelihood method, to create a general factor of creative abilities. The results are presented in the last row of Table 1. In the second step, the descriptive statistics of variables were calculated separately for the group of students of average intelligence (IQ < 120) and those with high intelligence (IQ ≥ 120) (Table 2).

In the third step, polynomial regression analysis was conducted, where creative abilities (raw score as well as the factor score) served as the dependent variable, with intelligence and intelligence-centered squared term as predictors, to examine possible curvilinear relations (cf. Table 3). When a positive and statistically significant predictor effect appears and the effect of its quadratic term is negative or insignificant (a relation of inverted U or J occurs) the TH is confirmed according to strategy A. In the fourth step, correlations between creative abilities and intelligence in the groups below and above the threshold were calculated and compared. Each of the coefficients was also corrected due to range restriction (Table 4).

Results

The correlations between divergent thinking tests and descriptive statistics are presented in Table 1.

All the correlation coefficients are statistically significant and fall between $r = .19$ and $r = .80$, with an average $r = .42$ and a median $r = .39$. All the subtests load a single factor of creative abilities with appropriate loadings (between .37 and .85). This factor explains 43.5% of the variance in the subtest result, and both the scree plot and the factors' eigenvalue clearly indicate that the single-factor solution should be chosen. Averaging the values of subtests to a single scale of creative abilities gave a highly reliable scale (Cronbach's α = .92).

90 students with an IQ < 120 and 14 students with an IQ ≥ 120 participated in the study. The average IQ of all the participating students was $M = 104.12$ ($SD = 15.03$), while in the group with an IQ < 120 it was $M = 100.12$ ($SD = 11.45$) and in the group with an IQ ≥ 120 $M = 129.80$ ($SD = 8.36$). These data confirm the earlier assumption of a restricted variance of IQ among highly intelligent students. The students from the group with an average and high IQ did not differ with regard to creative abilities ($F[1,103] =. 15, p > .05$). Polynomial regression confirmed the curvilinear relation between creative abilities and intelligence (cf. Table 3).

The model based on the raw results and factor scores confirms the threshold hypothesis according to the A strategy. The model explains approximately 8% of the variance of creative abilities. In both cases, intelligence introduced in the first

step was a significant predictor of creative abilities. In the second step, squared intelligence term was introduced, and was not statistically significant.

Table 1. Descriptive Statistics and Correlations between DT Tests

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	DT1 F	1	.78	.69	.56	.61	.47	.64	.51	.51	.34	.41	.26	.40	.52	.34	.30
2	DT1 O		1	.55	.54	.55	.53	.52	.51	.40	.27	.21	.26	.26	.40	.19	.22
3	DT2 F			1	.79	.74	.64	.70	.58	.52	.34	.49	.27	.34	.44	.38	.30
4	DT2 O				1	.65	.66	.57	.56	.39	.34	.40	.29	.25	.45	.33	.28
5	DT3 F					1	.77	.69	.55	.47	.29	.46	.23	.37	.48	.42	.36
6	DT3 O						1	.56	.57	.33	.27	.43	.31	.34	.37	.33	.30
7	DT4 F							1	.80	.49	.25	.43	.19	.44	.47	.43	.30
8	DT4 O								1	.37	.26	.39	.26	.39	.39	.37	.38
9	DT5 F									1	.57	.53	.29	.45	.38	.57	.30
10	DT5 O										1	.39	.37	.19	.25	.23	.20
11	DT6 F											1	.58	.47	.34	.43	.33
12	DT6 O												1	.19	.23	.28	.36
13	DT7 F													1	.63	.53	.35
14	DT7 O														1	.49	.39
15	DT8 F															1	.70
16	DT8 O																1
M		5.41	2.14	6.26	2.75	7.20	2.82	6.58	3.10	4.26	1.03	4.93	1.95	3.94	1.48	2.81	0.97
SD		2.58	1.48	3.00	1.83	3.09	1.49	3.47	2.15	2.17	0.97	2.21	1.13	2.29	1.07	1.80	0.99
Loading		.77	.67	.85	.78	.83	.75	.81	.73	.62	.42	.58	.37	.51	.60	.53	.45

Note. All the correlations are statistically significant at the level of $p < .05$. F – fluency, O – originality. DT1 – unusual uses of a brick, DT2 – unusual uses of a newspaper, DT3 – unusual uses of a button, DT4 – unusual uses of a paper clip, DT5 – associations with three triangles, DT6 – associations with a wavy line, DT7 – associations with two rectangles, DT8 associations with two ovals.

Table 2. Descriptive Statistics of Variables in the whole Sample and Selected Subsamples

	All (N = 104)		Average IQ (N = 90)		High IQ (N = 14)	
	M	SD	M	SD	M	SD
IQ	104.12	15.03	100.12	11.45	129.80	8.36
RPM	45.58	5.98	44.89	5.92	50.00	4.35
DT Tests (raw score)	3.61	1.41	3.58	1.32	3.76	1.96
DT Tests (factor score)	0.00	.98	-0.01	0.90	0.09	1.36

Table 3. The Results of Hierarchical Regression Analyses Examining the Adjustment of Linear and Quadratic Models When Creative Abilities are Predicted by Intelligence

	Creative Abilities (Raw Scores)				Creative Abilities (Factor Scores)		
	B (SE)	β	*R2*		*B (SE)*	β	*R2*
Step 1:				Step 1:			
RPM	.06 (.02)	.29**	.08	RPM	.05 (.01)	.31**	.08
Step 2:				Step 2:			
RPM	.07 (.02)	.30**	.07	RPM	.05 (.02)	.31**	.08
RPM2	0 (.002)	.01		RPM2	0 (.002)	.02	

**p < .01

Then, the correlation coefficients between intelligence and creative abilities below and above the threshold IQ = 120 were calculated (cf. Table 4).

Table 4. Comparisons of Pearson's below and above the Threshold without and with Correction for Restriction Range (Raw Scores and Factor Scores)

	N	Pearson's *r* (95% CI)	*r* corrected for restriction range (95% CI)
DT Raw Scores			
IQ<120	90	.34*** (.14 -.51)	.35 (.15 -.52)
IQ≥120	14	.04 (-.50 to .55)	.06 (-.49 to .57)
Pearson's *r* comparison		.98 (*ns*)	.95 (*ns*)
DT Factor Scores			
IQ<120	90	.36*** (.16 - .53)	.36 (.17 - .53)
IQ≥120	14	.05 (-.49 to .57)	.07 (-.48 to .58)
Pearson's *r* comparison		1.02 (*ns*)	.97 (*ns*)

Note. (*ns*) $p > .05$, ***$p < .001$. Categories of IQ based on the results highlighted RPM.

The relation is statistically significant only below the threshold. Neither of the coefficients differ ($z = .98$, $p > .05$). It could be argued that the obtained result confirms the threshold hypothesis only when criterion A is applied, but refutes it when the more restrictive criteria B and C are followed. Correction for restriction range slightly increases correlation coefficients. However, the correlation above the threshold is still not statistically significant, while below the threshold it is reliably higher than zero. Moreover, the correlation coefficients below and above the threshold do not differ from each other ($z = .95$, $p > .05$), which supports the TH when criterion A is applied, but contradicts it if criteria B or C are taken

into account. The structure of the relation between creative abilities (based on factor scores) and intelligence also supports the hypothesis only when criterion A is applied. The correlation between the variables is statistically significant below the threshold, but not different from 0 above it. At the same time, neither of the correlation coefficients differ ($z = 1.02$, $p > .05$) from each other. The correction for restriction range does not change the structure of the observed relations.[1]

Discussion

For over 60 years, studies on the relation between creative abilities and intelligence have been of scholars' interest. Despite numerous studies, both the theoretical (Kim, Cramond & Van Tassel-Baska, 2010; Sternberg & O'Hara, 1999) and empirical outcomes (Cho et al., 2010; Fuchs-Beauchamp et al., 1993; Kim, 2005; Runco et al., 2010, Sligh et al., 2005) for the relation between creativity and intelligence are unconvincing, sometimes even mutually contradictory. At the level of theoretical assumptions, the threshold hypothesis may be grounded in theories assuming that creative abilities are part of intelligence (Sternberg & O'Hara, 1999), as shown in Guilford's Structure of Intellect Model (SI) (Guilford, 1967), the Berlin Model of Intelligence Structure (BIS-HB) by Jäger (1984; in: Preckel, Holling, & Wiese, 2006) and the Cattell-Horn-Carroll intelligence model ([CHC] Carroll, 1993; Horn & Cattell, 1966; Horn & Noll, 1997). According to these theories, the threshold hypothesis can be treated as a specific example of Spearman's Law of Diminishing Returns (SLODR) (Spearman, 1927), which implies that there is a lower g saturation of cognitive tests with an increasing ability level. According to SLODR, the threshold hypothesis could be justified by a lower saturation of the g factor at higher levels of abilities (Preckel, Holling, & Wiese, 2006).

It has been argued that the confirmation or rejection of the threshold hypothesis too often comes from subjective decisions by scholars. It is also important to resolve problems related to the reliability of measurement – and in particular the measurement of creative abilities and restricted variance of IQ above the threshold. These problems weaken the correlation between intelligence and creative abilities, especially among highly intelligent people. Finally, it is important to adopt a proper strategy for data analysis and clearly define the criteria for accepting or rejecting the TH. In this study, we have tried to examine the validity of the threshold hypothesis

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[1] All significant correlations between average IQ and divergent thinking tests (raw and factor scores) were linear.

using three analytical strategies proposed and explained elsewhere (Karwowski & Gralewski, 2012).

A review of studies of the threshold hypothesis suggests that it tends to be confirmed in light of the most liberal analytical strategy (criterion A), which is based on a comparison of correlation coefficients between intelligence and creative abilities below and above the threshold to zero. However, such an approach can lead to erroneous conclusions resulting from the limited IQ variance above the threshold, which also reduces the correlation. Therefore, Karwowski and Gralewski (2012) proposed two additional criteria (B and C), assuming a more restrictive test of the TH.

The obtained results demonstrate that whether the threshold hypothesis is confirmed or not depends largely on the analytical strategy applied. The TH was confirmed only when the most liberal analytical strategy was applied. It was refuted when more rigorous analytical strategies (B or C) were applied. Using more stringent criteria (B and C) a comparison of correlation coefficients below and above the threshold, taking into account the size of the compared subsamples, however, rejects the TH. The conducted comparisons clearly indicate that, although the correlation between intelligence and creative abilities below the threshold is stronger than the correlation above the threshold, the difference between them is not reliable.

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Review

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Book review:
A Guide to Practitioner Research in Education
by Ian Menter, Dely Elliot, Moira Hulme,
Jon Lewin and Kevin Lowden,
SAGE 2011, 264 pages, Hardcover

For decades educational researchers have been struggling with the question of which factor explains student outcomes the most. The famous Coleman report, as well as further studies inspired by it, indicated family background as this factor. Nowadays this hypothesis is under criticism by researchers who claim that genetic factors determine student outcomes the most.

Pragmatic-oriented educational researchers are more focused on factors that may be influenced by education policy-makers' decisions. Recent studies have shown that the most promising factor, in terms of the influence on student achievement, is the teacher. Paraphrasing Eric Hanushek, one may say that if we want to improve something in education, teachers' skills should be the most important topic.

How to improve teachers' skills? Monitoring teacher training, additional courses for teachers and performance-based incentive systems are only a few possible answers. Nevertheless, one of the most important problems is to encourage teachers to evaluate their own work and through this, identify possibilities of improvement in their own practices. This idea can be captured in phrases such as *action research, evidence based education, research engaged teacher and self-evaluation.*

All the initiatives which promote the idea of evidence-based education are worth popularising. One such initiative is a book titled *A Guide to Practitioner Research in Education*, which provides a straightforward introduction to practitioner research valuable both for experienced teachers and students.

A Guide... is practical, user friendly, clearly written and it promotes good

research practices. Is has been written with the help and consultancy of teachers and practitioner researchers. It does not describe an ideal type of research, but points to factors that may limit research projects and provides solutions of how to deal with those limitations to avoid results bias.

The book leads, step by step, through how to conduct a small scale research project; it provides many practical tips; it includes check lists for researchers of what not to forget while planning a research project; it includes real examples of research designs, questionnaires, analyses, etc. The examples shown are from Great Britain, hence if this book is to be translated into Polish, it needs to be filled with adequate examples taken from the Polish educational system.

The structure of the book is intuitive as it goes through research project stages described by common questions, e.g. *What do we want to know?* equals conceptualisation; *How will we find out?* equals operationalisation; *What does it means?* equals data analysis and results interpretation. A vast part of the book is devoted to research conceptualisation and preparation, including a literature review. Careful conceptualisation is very important as it helps to avoid many problems during the fieldwork and data analysis.

Would this book be used by teachers in Poland? Unless a system which enlists best candidates for the teaching profession as well as adequate incentive programs are put into practice, it is unreasonable to expect teachers to get involved in educational action research or systematic self-evaluation, which is additional unpaid work for them. Despite the financing issue to enable educational action research in Poland, academics should be involved in establishing a network of methodology and research design advisors accessible for teachers willing to conduct their own research projects.

Yet, it might be truly beneficial to translate the book into Polish. Before favorable system conditions are developed to provide evidence-based education in Poland, this book may be a very valuable textbook both for active and devoted teachers and pedagogy students.