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Prospective Biology Teachers' Views about Field Trip to National Park

Research Article

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ABSTRACT

Manyas Bird Paradise National Park has an international importance as water birds migrating from Africa to Europe and Asia are located on main migration routes. The purpose of the study was to investigate the prospective biology teachers' views on the field trip to Manyas Bird Paradise National Park, Turkey. A case study design was used in the study. Participants included 31 prospective biology teachers studying in Necatibey Faculty of Education in Balikesir University, Turkey in the spring term of 2017-2018 academic years. Data were collected by an open-ended questionnaire and analyzed by content analyses technique. The study results showed that the students' aims to participate the field trip partly fulfilled after the field trip. It was observed that the students' expectations were met, especially birds and social activity. One of the benefits of field trip was to contribute theory that the students learnt in their courses. The students made some suggestions, particularly to see more bird species and watch them closely in the study.

Keywords:
Field trip, outdoor learning, national park, prospective biology teachers

Introduction

Learning can take place anywhere in the classroom, outside the classroom or outside the school. It is important that students combine their knowledge obtained in school with outdoor learning activities. The task of forming the bridge is given to the teachers who will organize outdoor learning activities. Therefore, it is important for teachers to plan learning environments by combining course programs with outdoor learning activities (Anderson, Thomas, & Ellenbogen, 2003). Outdoor learning can be carried out in many places outside the school, such as home, TV, Internet website, museum, science museum, park, botanical garden, forest, and wetland (Howe & Disinger, 1998).

Biology contains many abstract concepts. In addition, biology is an area that can be associated with daily life, where many subjects can be observed with live samples in nature. Therefore, besides theoretical

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courses, Biology course should be supported by activities to be organized in outdoor environmental settings. To observe one to one theoretical examples of nature taught in courses in environments outside of school may lead to more permanent learning. Since outdoor learning is important way of learning biology, it needs to be repeated more than one for students, and it is crucial to be justified as real study by supporting assessment to students and with parents, others in school by complementing assessment part to it. Outdoor learning should also provide freedom to students (Kervinen, Uitto, & Juuti, 2020).

One of the possibilities to organize outdoor learning environment related to Biology is to organize field trip. In Biology courses, to organize a field trip can motivate students' learning and increase their environmental awareness and interest to nature. Field trips can be organized to many places for example, wetland, botanical garden, jungle, park, natural park, natural history museum, art gallery, and science museum (Anderson & Zang, 2003; Davidson, Passmore, & Anderson, 2010; Kisiel, 2005). Field trips can be made to different places such as museums or science museums as virtual trips (Caliskan, 2011). Although students think that the use of virtual field trips as part of their university experience as valuable learning experience but they cannot be replaced real field trips (Spicer & Stratford, 2001).

During field trip students observe real life and they get direct information from their observation. Thus, students can learn integrally by experiencing their school information. New experiences make satisfied and give enjoy to them. Students will be satisfied with the outdoor activities in terms of both learning and socializing (Krakowka, 2012; Palmberg & Kuru, 2000; Yani, 2018). Ezechi (2018) reported that field trip was an effective method of teaching providing useful knowledge to students while having fun and relaxation at the same time. He showed that teachers organized field trip once a year although some teachers did not use field trip in biology course at all. Sagala (2006) states that there are several steps in conducting field trip: "(1) Set the intended competence for students to achieve; (2) Planning the goals; (3) Formulating the activity; (4) Conducting activity (5) Assessing the activity; and (6) Reporting the result. Before conducting field trip students must be given instruction about the field trip" (cited in Yani, 2018, p.32).

There are many research on field trips area (Achen, Warren, Fazzari, Jorich, & Thorne, 2019; Bozdogan, 2012, 2016; Cetin, 2014; Dogan, Cicek; & Sarac, 2018; Kamen & Leri, 2019; Turkmen, Topkac, & Atasayar Yamik, 2016). In the study of Turkmen et al. (2016), five grade students found the Natural History Museum in Izmir as fun despite the fact that they were not very pleased with Botanical Garden in Izmir. Kamen and Leri (2019) found that the students benefit from particularly social aspect, and connecting between real life and science majors. Olajide (2019) exhibited that field trip and peer tutoring instructional methods were effective on the students' science process skills gaining in basic Science and Technology in secondary schools. Dinata and Amprasto (2018) demonstrated that field trip affected the high school students' scientific literacy and attitude towards science in ecosystem concept. Rusdi (2019) showed that a quasi-experimental field trip method was effective in increasing students' biodiversity values. Cetin (2014) concluded that to held a field trip to Kazdagi National Park, Turkey the prospective biology teachers mostly enjoyed the field trip and contributed to courses, especially Systematic Botany and Biogeography courses. Achen et al. (2019) concluded that field trip increased students' professional preparation helped them associate to course content. Graduate sport management students evaluated field trip to as a valuable educational and social experience. Yani (2018) concluded that the application of field trip to Kebun Raya Bogor, Indonesia on ecology subject in biology education study program proved theory that students learnt in the classroom since the students done all activities in according to procedure given. Ibrahim, Surtikanti and Riandi (2017) showed that inquiry based-integrated fieldtrip program developed students' problem solving abilities, scientific attitudes and concept mastery among students in Ecology, Invertebrate Zoology, Cryptogramic Botany, and Phanerogamic Botany courses in biology education.

On the other hand, there are some disadvantages of field trip. While organizing a field trip some obstacles for instance, course program, security, high cost, permission, class size, responsibility, preparatory period of field trip, management groups, and not being able to realize all targeted ones can be encountered (Monday, 2008; Yani, 2018). Tatar and Bagriyanik (2012) reported that Science and Technology teachers performed activities related to outdoor activity such as science-related model/material preparation or book/magazine reading activities related to outdoor learning the most, although they did summer camps, youth center, and aquarium visits at least. Moreover, it can be observed that some of the school trips do not go beyond social activity. When field trips can be hold both having fun with social purposes, and well planned and organized related to school knowledge, field trips will be more efficient. Teachers should make a well-structured field trip plan considering some problems such as course program, cost, permission and class size in order to organize an effective field trip (Achen et al., 2019; Krakowka, 2012).A review of the literature fails to reveal any study reported in Turkey related to field trip to Manyas Bird Paradise National Park, Turkey with prospective biology teachers. Manyas Bird Paradise National Park is one of the important national parks in Turkey, especially for birds' migration routes. Therefore, it is so vital that prospective biology teachers, who are future teachers, participate and experience to field trips in their faculties. In this way, prospective teachers will also have the opportunity to see both the field trip planning and field trip application stages. It is assumed that this study will contribute to the relevant literature of the findings related to determining the views of prospective biology teachers about a national park on internationally migration routes.

Purpose of the Research

The purpose of the study was to investigate the prospective biology teachers' views on the field trip to Manyas Bird Paradise National Park, Turkey. This study addressed five research questions about field trip:

1. What were the students' aims of the field trip?
2. What were the students' observations of the field trip?
3. What were the students' views on the contribution on courses about the field trip?
4. What were the students' realization levels of their aims about the field trip?
5. What were the students' suggestions about the field trip?

Method

A case study design from qualitative research methods was used to get more detailed results rather than generalized results of the study in order to address to research questions in this study (Buyukozturk, Kilic Cakmak, Akgun, Karadeniz, & Demirel, 2017).

Participants

A one-day field trip to national park was organized with 31 fourth and fifth grade prospective biology teachers studying in Necatibey Faculty of Education, Balikesir University, Turkey at the end of the spring term of the 2017-2018 academic years. Participants were selected by using convenience and criterion sampling methods in the study (Buyukozturk et al., 2017).

Some field trips have been hold every year by the instructors in the department of biology education in Necatibey Faculty of Education in Balikesir University, Turkey. As most of the participants of the study had previously took part in field trips to Kazdag National Park, and also Uludag National Park, Turkey, they have field trip experience. Those field trips gave them an opportunity to complete their knowledge of plant vegetation in forests, animals, fungi, and lichens. Thus, they had the chance to see the theoretical biology knowledge practically on the field trips. The students who were in the fourth and fifth grade have seen many courses related to plants, animals etc. in detail. The participants took compulsory courses in biology education

program, for instance General Biology, Systematic Botany, Systematic Zoology, and Evolution. They also took elective courses such as Ecology and Biogeography. In addition, a field trip-observation plan has been prepared by prospective biology teachers for the courses of 'Instructional Technology and Material Development' and 'Concept Development in Biology Education' given by the author of the article.

Field Trip Area

In the study Manyas Bird Paradise National Park was selected as field trip, as it has international importance as water birds migrating from Africa to Europe and Asia are located on main migration routes. This park is one of the most suitable places in the word for birds to stopover, resting, feeding, and breeding and continues on their way. The national park is located in the Marmara Region Balikesir, Turkey. It was declared in 1959 as national park including 24 047 hectare of surface area. It holds a Class a Wetland Certificate. In the national park there are two parts: Information Center and Bird Observation Tower. While a guide and a staff introduce Information Center comprising a small museum of the stuffed specimens to visitors, a staff introduce Bird Observation Tower to visitors. This park is the center of attention of visitors. Water bird nest area in the national park are monitored by the camera system. National Park is so rich in living beings like 266 bird species, 118 plant species, 23 fish species, various reptile species, and plankton etc. Many birds such as Dalmatian pelican, Great white pelican, heron, cormorant, and Wild goose, Wild duck etc. have been nesting in willow tree and reeds in the national park. In Lake there are many fishes including bass, pike, catfish, carp, freshwater mullet, and rudd etc. (Kus Cenneti Milli Parki [Bird Paradise National Park] (2019).

Data Collection

This field trip was planned to be an effective outdoor activity for students. After getting permission for the trip, field trip brochures with QR code of Bird Paradise National Park prepared by Dogru, Onal, Tezel, Varol and Solmaz (2017) under the guidance of the author of the article were distributed to the students before the field trip. The brochure has additional information about national park, such as animals, specifically bird varieties, plants etc. The students were asked to participate the trip after examining the brochures.

A one-day field trip to national park was organized with 31 participants at the end of the spring term of the 2017-2018 academic years under guidance of two tutors in department of biology education (one botanist and the author of the article). Although there were some visitors in the natural park on the day of field trip, national park presentation was made specifically to the participants of the study. Firstly, the natural park and the museum were introduced by an officer in the Information Center in Manyas Bird Paradise Natural Park. Here the students were also asked whether they have examined the brochure with QR code in advance. If they were not, they were reminded to read QR codes. Then, one guide worked in the Information Center introduced closed circuit camera system that could be observed birds and their pups to the students. The students had observed birds' habitats, especially pelicans which were specific to national park. Later, the students went to the Observation Tower to observe birds with 15 binoculars in two groups. There, they observed birds' habitats, chiefly pelicans. Moreover, both the tutors gave some information about national park birds, plants and animals found in Manyas Bird Paradise National Park during the field trip.

In this study, Questionnaire on Field Trip to Manyas with five open-ended questions developed by the researcher was used. The questionnaire was developed by using the interview form used in the study about the trip to Kazdagi National Park (Cetin, 2014). While the students were asked to write their aims before the trip at the faculty, they were asked to write their observations, the contribution of the trip to the courses, the level of achieving the trip goals and the suggestions after the trip at the faculty. The validity of the questionnaire was provided by an academician specialized in botany and a researcher specialized in

classroom teaching. Questionnaire was applied to all participants based on a voluntary participation. The survey duration was 20 minutes.

Data Analysis

Data were analyzed by using content analysis technique and data analyzing stages were: Coding and extraction, sample code image compilation; category development; validity and reliability; and quantitative data analysis (Saban, 2008; Yildirim & Simsek, 2006). The codes related to each question were collected under certain categories. Then, they were presented in the tables as findings. Although the questionnaire was answered by 31 people, the total number of codes in the table for this question may exceed 31 as the answers given to a question sometimes contain more than one code. All codes (sentences) in the tables were as positive, semi-positive (+ -) and negative (-). Then, the frequencies of codes and categories were calculated. The students were encoded in the paper with a letter abbreviation for 'Student, a number, e.g., S1 and S20. In the findings part the examples of the students' responses related to highest three categories for each question. Striking student responses to the codes were included in the paper as like "…" (S20).

Process of coding and developing category was repeated many times by the author of the article at intervals in order to provide intra-rater reliability. Opinions of two experts (computer and technology educator and classroom teaching educator who were studying on qualitative study) were consulted to ensure inter-rater reliability. According to first expert opinion, Cohen's kappa value was calculated as 0.96. Later, the author of the article and the researcher came together to review all categories and all tables were matched. The author of the study examined the codes and categories in each table after one year. Recent codes and categories in each table were presented to examine the second expert. Reliability coefficient was found as 99% according to Miles and Huberman (1994). After the author of the study and the expert came together to review all categories, the final tables approved by the researchers were created.

Findings

Aims of the Field Trip

The answers given by the prospective biology teachers when they were asked their aims of the field trip were grouped under six categories: Birds (40), Biodiversity (22), Social Activity (15), Bird Paradise Natural Park and its Surroundings (11), Courses (8), Information Center, Guide (3) (See Table 1).

Table 1. Aims of the field trip

Category (f)	Code (f) (Total 99 codes)
Bird Paradise Natural Park and its Surroundings (11)	To sightsee./To see Manyas./To see, learn and observe nature, ecosystem, and natural beauties./To learn why birds choose Manyas./To see what extent Bird Paradise meets the definition of national park. (11)
Information Center, Guide (3)	To visit the Information Center. (2) To expect seeing a guide in the Center. (1)
Birds (40)	To see flamingos more closely. (2) To have information, see and investigate a number of bird species./To take photo of bird species. (26) To have knowledge, see and investigate birds' habitats. (10) To learn and observe birds' migration routes. (2)
Biodiversity (22)	Botany: To have information about and see various plant species. (9) Animal: To observe snake, frog and other animal species found in Lake and its surroundings. (4) Other: To see biodiversity of living organisms and get information. (9)

Courses (8)	Zoology: To see birds and various living beings will contribute to Zoology courses and Zoology exam. (3) Botany: To see various living beings will contribute to Botany courses. (1) Biology: To think that it would contribute to Biology courses. (1) Learning: To learn and have information. (3)
Social Activity (15)	Having Fun: To have fun and have a nice day. (12) Activity: To expect different activities. To attend social activities. (2) Photograph: To take a photo. (1)

According to Table 1, the students had very different responses as to the aims of the field trip. The question of a aims of the field trips was mainly familiar by the following three categories of 'Birds; Biodiversity; Social Activity':

Birds:

To obtain information about birds' lives. (S22)
To watch birds' courtship dance. (S1)
To learn birds' migration routes. (S13)

Biodiversity:

To learn the differences of aquatic plants from other plants. (S1)
To observe plants species that I did not see beforehand. (S23)
To observe snake. (S23)
To see living beings in their environment that we examined them in courses. (S2)

Social Activity:

To take photo of bird species. (S5)
Having social activities. (S25)

Moreover, other interesting examples were:

Realizing such natural beauties and working towards protection, and encouraging other people to see here. (S2)
To learn the reasons for choosing birds Manyas. (S13)
To see what extent Manyas Bird Paradise meets the definition of national park. (S29)
I wonder if there will be a guide in the Museum. (S27)

As a result, it has been determined that the students participated in the trip with 'Birds; Biodiversity; Social Activity' at most.

Observations of the Field Trip

The answers given by the prospective biology teachers when they were asked their observations of the field trip were grouped under seven categories including Birds (49), Information Center, Guide (16), Observation Tower, Binoculars (13), Bird Paradise Natural Park and its Surroundings (13), Biodiversity (12), National Park (1), Brochure (1) (See Table 2).

Table 2. Observations of the field trip

Category (f)	Code (f) (Positive: 94, Negative: 12, Total: 106)
Bird Paradise Natural Park and its Surroundings (13)	I came to Bird Paradise for the first time and I liked it./We observed nature and environment./Everywhere was green. The woodland, the trees were pleasant./We observed that a place where migratory birds came to reproduce./We learnt that there were documentary-style shots./We learnt that the reason for choosing birds Lake Manyas. (12) (-) It could have been in a larger area. (1) (-) Pollen allergy made problem. (1)
National Park (1)	We learnt why this area was national park. (1)
Information Center, Guide (16)	Information Center: We visit the Information Center including the stuffed birds. It was a great place./We saw short introduction videos of Bird Paradise and live birds' footages. (9) Guide: We were adequately informed. (7)
Observation Tower, Binoculars (13)	Observation Tower: It was nice to observe birds from the small windows of the Tower. (2) Binoculars: Observing with binoculars was favorite point of the trip./We had a chance to see birds and birds' nest with binoculars in the Tower. (11)
Birds (49)	We saw, had information and investigated various bird species./We saw so many bird groups./We had opportunity to see 5 different birds.(16) We saw and observed pelicans, cormorants, herons, and Gray heron. (12) We learnt and examined the habitats of birds, especially pelicans in the Tower./We saw birds' eggs and offspring./We learnt birds' food sources. (9) (-) Birds: We would expect to see more birds and bird species, and see them closely. (8) Migration: We observed birds' migrating in Manyas. (3) (-) Enough information did not presented about migration routes. (1)
Biodiversity (12)	Plant: We saw different plant species than I saw various plants. (3) Animal: We saw fish, Tree frog, reptile, invertebrate organism, and other living beings. (9)
Brochure (1)	The brochures with QR code were highly informative. (1)

Table 2 displays that the students' responses composed of three main categories: 'Birds; Information Center, Guide; Observation Tower, Binoculars; Bird Paradise Natural Park and its Surroundings'. Representative samples of the students' answers were presented below:

Birds:

We saw different pelican species. (S11)
We observed the birds migrating in Manyas during the migration. (S8)
I learnt that birds' food sources were fish and plankton in the Lake. (S13)
We saw birds' eggs and their offspring. (S29)
(+ -) *Although there were 60 different birds, we could not see all of them.* (S15)

Information Center, Guide:

We have seen short introduction videos and a live bird images about Bird Paradise. (S27)
We saw many stuffed bird species. (S1)
Dead samples in the building were so informative. (S17)
In the Information Center we learnt Dalmatian pelican and Great white pelican species, their habitats and some information. (S19)

Observation Tower, Binoculars:

I learnt how to distinguish some bird species like Great white pelican and Dalmatian pelican species. Even though observing with binoculars, I was able to distinguish pelicans. (S20)

At the Bird Paradise Observatory, we closely observed the habitat of birds with binoculars. (S19)
What I liked the most was watching birds without disturbing them from the Tower. (S14)
Observing with binoculars was my favorite thing in the trip. (S23)
(+ -) *In Manyas Paradise I thought we would see birds up close, but we observed pelicans and a few bird species from afar in order not to frighten them.* (S21)

Bird Paradise Natural Park and its Surroundings:

I went to Manyas Bird Paradise for the first time and I liked its natural environment so much. (S26)
We learnt that the reason for choosing birds Lake Manyas was that the Lake was shallow. (S13)
I observed that a place where migratory birds come to reproduce. (S9)
Documentary-style shots were made there. (S16)

Other striking answers were:

We learnt why it was a national park. (S15)
The brochures with QR code prepared by our friends were very informative. (S26)

On the other hand, the students were not satisfied with some issues according to 11 students' codes:

(-) *It could have found in a larger area.* (S23)
(-) *I would like to see more species.* (S23)
(-) *If we could see birds closely, it would be better.* (S24)
(-) *Not enough information has been provided about migration routes.* (S13)

It was concluded that the students enjoyed the trip except 11 students' code, and 'Birds; Information Center, Guide; Observation Tower, Binoculars; Bird Paradise Natural Park and its Surroundings' at most during the field trip.

Contribution on Courses about the Field Trip

The answers given by the prospective biology teachers when they were asked their observations of the field trip involved six categories from highest frequency to lowest order: Zoology (34), Ecology (11), Botany (8), Other Courses (6), Biogeography (5), Teaching Profession (1) (Table 3).

Table 3. Contribution on courses about the field trip

Category (f)	Code (f) (Positive: 61, Negative: 2, Total: 63)
Zoology (34)	Animals: It was related to Zoology courses that we had the opportunity to observe bird species and animals in their habitats./We observed our theoretical knowledge practically. (7) Birds: We saw birds here that made permanent knowledge for Zoology./We saw several bird species in Manyas that we were taught birds in Zoology./We correlated to birds species to Zoology, Systematic Zoology or Systematic II courses./We learnt to differentiate pelican species by morphologically./We could use the information about birds that have gone through migration in Zoology. (11) Seeing birds shown in theory of Zoology as stuffed birds at the Information Center and live birds made experience. (6) We learnt and seen birds' habitats and baby care that we studied in courses in Bird Paradise. (3) We had the opportunity to which seasons birds migrate where and examine the nature. (1) (+ -) We observed most of the birds at the Information Center that we saw birds in Zoology, but it could have been more efficient. (2) Animal Anatomy and Physiology: It was related to Animal Anatomy./Bird species made it permanent for Animal Anatomy./We could use the information about birds that we saw during migration in Animal Anatomy. (4)

Botany (8)	Plants: We saw plants./It was related to Botany and Systematic Botany in terms of trees found in the environment. (7) (-) Field trip was not related to Botany. (1)
Ecology (11)	It was related to Ecology./It was related to environment and living beings varieties./We had the opportunity to which seasons birds migrate where and examine the nature./Living beings needed to be considerate, sensitive and responsive./A link was with birds' incubation period. (10) The trip has made learning permanent for the environment. (1)
Biogeography (5)	It was related to Biogeography./We contacted bird species found in various regions related to Geography./We saw plants, flowers, and birds live. (4) This trip has made it permanent for the environment. (1)
Other Courses (6)	General Biology: The trip made learning permanent for general information./This field trip would increase the students' interest in Biology. (2) (-) Cytology: It was not related to Cytology. (1) Learning: The information learnt by seeing would increase permanence of information./We saw the things stated in the course in real life. (3)
Teaching Profession (1)	I would talk about this field trip during my teaching profession. (1)

As can be seen in Table 3, the students' opinions on the contribution of field trip to courses varied. Examples of student opinions about the categories of 'Zoology; Ecology and Botany' with the highest frequency were as follows:

Zoology:

In Zoology we learnt that reproduction differentiated species that were close to each other morphologically. We saw it in pelicans in Manyas field trip. (S1)

To observe birds as both stuffed birds and live birds seen in theory added experience. (S13)

We learnt birds the same week in Zoology course. We learnt the obvious differences between the heron and the Gray heron. We tried to see the birds we learnt in the course. By seeing birds like pelican and cormorant, we made the oral information visual and made it permanent. We learnt about birds' habitats and offspring care. (S8)

… In courses subjects were not exactly remembered because they were only theoretically processed. Seeing birds live allowed me to get more memorable information about them. (S11)

It has been permanent about bird species for Zoology and Animal Anatomy because we examined bird species in both of these courses and we got more information about them. (S15)

(+ -) *We examined birds in Zoology. We had the chance to see birds in the Museum, but we did not have enough information about the birds there.* (S5)

Ecology and Botany:

Our observations were linked to Ecology, Botany and Zoology courses because Bird Paradise was not just birds, there were plants and we had the opportunity to observe them. (S17)

We had the opportunity to examine the nature and in which season's birds migrated where. (S29)

I had established a relationship between Systematic Botany with plants found in the environment. (S20)

There were also students who stated that field trip increased the love of nature:

It was a place to be seen in order to love nature more. After seeing this place, students' interest in Biology would increase. (S27)

I learnt that I needed to approach living beings more sensitive, sensitive, and thoughtful. (S21)

On the other hand, there is one student who thinks that the trip is not related to some courses:

Field trip had nothing to do with Botany and Cytology courses. (S9)

Sum up, they associated the trip with Zoology, Ecology and Botany courses at most.

Realization Levels of Aims about the Field Trip

The answers given by the students when they were asked their realization levels of their objectives about the field trip were collected under eight categories including Birds (28), Observation Tower, Binoculars (11), Social Activity (9), Information Center (6), Courses (5), Bird Paradise Natural Park and its Surroundings (4), Biodiversity (4), Program, Duration (2) respectively (See Table 4).

Table 4. Realization levels of aims about the field trip

Category (f)	**Code (f) (Positive: 51, Negative: 20, Total: 69 codes)**
Bird Paradise Natural Park and its Surroundings (4)	We observed and investigated nature./Place was so beautiful, and important for plants and animals. (4)
Information Center (6)	The stuffed birds seen in Information Center were beautiful. (4) (-) We saw other bird species only in the exhibition./Apart from videos and live images, we did not see too many bird species. (2)
Observation Tower, Binoculars (11)	Observation Tower: (+ -) We were expecting to see birds closely, but we looked through the Observation Tower. (2) (+ -) We saw bird species, but we did not have much opportunity to watch with binoculars because the time was limited. (1) Binoculars: It was an advantage for me to learn how to use binoculars./It was so nice to observe many bird species closely with binoculars./We saw birds' habitats with binoculars. (6) (-) We saw 2-3 bird species. We saw birds from afar with binoculars./I would like to observe more live birds. (2)
Birds (28)	We observed bird species and offspring in their habitats. It was very beautiful./We saw birds on site, where we heard only the name before./We saw pelicans there and it was quite beautiful. (12) We saw birds' migration routes. (1) (+ -) My expectations were met more than 50%. We did not see bird species as much as I expected. (1) (-) We could not see many bird species./We saw only 3-4 bird species live./It would be better if we observed what we saw in the Information Center live./I would like to see more closely bird species. (13) (-) We could not see flamingo. (1)
Biodiversity (4)	Plant: We saw plant species in the national park. (1) Animal: We saw animals in the national park./There were snake and fish species in Lake. (2) (-) I would have expected to see a live snake. (1)
Courses (5)	It has contributed to my biology knowledge a lot./It was informative and educational field trip. (5)
Social Activity (9)	Entertainment: It was a beautiful and enjoyable trip. (9)
Program, Duration (2)	Planning: The field trip was planned as best it could be. (1) (-) Duration: The trip was short. (1)

Table 4 shows that the students meet some goals about the trip. The students found the trip entertaining and instructive at most. The highest frequencies were related to the categories of 'Birds; Observation Tower, Binoculars; Social Activity'. Nevertheless, some students were not very pleased because they observed a few and far away birds according to the categories of 'Birds; Observation Tower, Binoculars'.

Birds:

Such field trips were very beautiful and very useful. We saw birds' migration routes, bird offspring and bird mock-ups. (S28)

(+ -) My *expectation was to see birds and to examine their structure. I saw pelicans there and it was pretty nice. I would also like to see more of a live bird.* (S12)

(+ -) *It was very useful for nature. It was an important place for plants and animals. However, in this period of the year, there was no wealth in terms of bird species. We observed 4-5 bird species. I was hoping to observe more and more different species.* (S16)

(+ -) My *goals and expectations were mostly met. We could see many birds. I had expected to see it more closely.* (S24)

Observation Tower, Binoculars:

We have observed many bird species. It was quite nice to observe birds closely with binoculars. By walking to the national park altogether, it was possible to observe most of its locations, and plant species and animal species. (S19)

I wanted to observe birds on field trip. I have observed birds for the purpose. We saw their habitats with binoculars. It was an informative and instructive field trip. (S8)

(+ -) *My goals and expectations were met more than I expected. We saw bird species as a purpose. On the other hand, we did not have much opportunity to watch with binoculars since the time was limited.* (S21)

(+ -) *My expectations were met but we could not observe enough different species. Observing with binoculars gave different experience.* (S13)

(+ -) *I would expect to observe more birds live. We watched the birds from afar with binoculars. I would expect to see more bird species and them closely.* (S7)

Social Activity:

Field trip was good. We even went to the beach and we had dinner there. (S10)

We had both learnt. We had fun. Field trip was planned to be the best it could be. (S22)

(+ -) *It was a pity that it was short. I was expecting to see different birds. However, overall it was a fun and educational field trip.* (S18)

Fascinating responses related to the categories of 'Bird Paradise Natural Park and its Surroundings; Information Center; Biodiversity; Courses; Program, Duration' were:

I was interested to fill and display dead birds there. There were also snake and fish species in the lake. (S14)

I thought that my information was permanent since I had a chance to examine the types I saw in biology field courses in natural environment. Since my aim was to be informed, I thought it contributed a lot to my biology knowledge. (S6)

(+ -) *The area demonstrated the stuffed birds were beautiful. If we observed them alive, it would be nice and beautiful too.* (S7)

On the other hand, some students stated that their expectations were not met related to categories of 'Birds; 'Observation Tower, Binoculars; Program, Duration'. For example;

(-) *To see only 3-4 bird species live does not fit Bird Paradise.* (S1)

(-) *I wanted to see more bird varieties live and closely. However, we saw 2-3 birds and we saw them from afar with binoculars.* (S5)

As a result, it was observed that the students' objectives of the field trip were realized in the categories about 'Social Activity; Courses; Bird Paradise Natural Park and its Surroundings; Biodiversity' at most. The

students' aims concerning birds were met almost half since they observed only few birds and also with binocular.

Suggestions about the Field Trip

When the students were asked if you had any suggestions about the field trip; total 12 codes were determined to be related to 'no suggestions' and 23 codes related to 'suggestions'. Nine (S2, S10, S22, S24, S25, S26, S29, S30, S31) students who said that I had no suggestions for field trips stated that I had no suggestions./My expectations were met./It was good enough./Everything was beautiful and great./Field trip was the best it could be.

In addition, S8 and S17 mentioned the followings about field trip:

Field trip content was nice and it met my expectations. (S8)
Field trip was the best. Although the group was relatively crowded, it might be difficult to make a different application. (S17)

The suggestions of the students' suggestions about the field trip were grouped under seven categories related to Observation Tower, Binoculars (6), Guide (5), Program, Duration (4), Birds (3), Trip Repetition (3), Bird Paradise Natural Park and its Surroundings (1), Social Activity (1) respectively (See Table 5).

Table 5: Suggestions about the field trip

Category (f)	**Code (f) (Total 23 codes)**
Bird Paradise Natural Park and its Surroundings (1)	There may be a walkway with glass for bird observation. (1)
Guide (5)	The field trip should be accompanied by a guide outside the Information Center./A zoologist should be present to provide information about birds on the field trip. (5)
Observation Tower, Binoculars (6)	Observation Tower: We could have spent more time in the Tower. (2) Binoculars: Birds should be observed in the Tower with fewer students and alternating use of binoculars. (2) The number of binoculars could be increased. (2)
Birds (3)	There were very few live bird species in Bird Paradise. They should be reproduced. (2) I would love to see more birds. (1)
Social Activity (1)	In the field trip a picnic could be done. (1)
Program, Duration (4)	Date: The trip should be organized on the date when the birds might be dense. (2) Duration: Field trip should be longer. (1) Location: There could be gone to different places on the field trip too. (1)
Trip Repetition (3)	Field trip could be repeated. (3)

Remarkable student suggestions about the field trip were presented below:

Observation Tower, Binoculars:

This was alternating with few students so that students could observe birds equally in the Tower. (S6)
The students should visit the Tower as binoculars' numbers. Everyone should be given 10 observation times. There was confusion. (S14)

Guide:

There may be a guide informing about the species shown in the Museum during the field trip. (S23)
I would like to go with a guide while walking on the road. (S12)

Program, Duration:

To see more bird species, there should be go on a date when birds were more intense. (S16)
Field trip should not be limited to Manyas Bird Paradise, but also to different places. (S4)

In addition, there are three suggestions mentioning the trip to be repeated (S9, S15, S11). They said that field trip content was good and it was nice to watch with binoculars.

It was nice to look birds with binoculars. So something like this could be done again. (S11)

As a result, even so there were 12 codes including no suggestion related to the trip, there were 23 suggestions including the categories of 'Observation Tower, Binoculars; Guide; Program, Duration' at most.

Conclusion and Discussion

This study investigated that the prospective biology teachers' views on the field trip to Manyas Bird Paradise National Park, Turkey. In the light of the study findings, the following conclusions were reached:

It was determined that the students participated to the field trip as purpose of the categories of 'Birds; Biodiversity; Social Activity; Bird Paradise Natural Park and its Surroundings; Courses; Information Center, Guide' before the field trip. The students' aims were met according to the categories of 'Birds; Observation Tower, Binoculars; Social Activity; Information Center; Courses; Bird Paradise Natural Park and its Surroundings; Biodiversity; Program, Duration' correspondingly. While they participated the trip aiming 'Birds; Biodiversity; Social Activity' at most in the beginning of the trip, they reached the aims related to 'Birds; Observation Tower, Binoculars; Social Activity' at most in the end of the trip. Concerning the field trip observation, the students were mainly satisfied and had a good time while visiting Bird Paradise, and the Information Center and the Tower, especially examining birds. The students liked seeing the stuffed birds, specifically pelicans, at the Information Center. They were contented to the guidance there. The students were delightful watching birds and their nests with binoculars in the Tower. Whereas the students had fun in attending the trip and watching birds, and other plants and animals, some students would expected to see more bird species and to watch them closely. Therefore, in future excursions should be organized that birds could be observed more intensely. Regarding the contribution of field trip to the courses, the students mostly associate the trip with Zoology, Ecology, and Botany courses. The students were specifically contented to see the birds and theoretical knowledge they saw in Zoology here. The students associated Ecology with the environment and various living beings. They learnt why birds chose Bird Paradise as their habitat. The students had a relationship between Botany and plants on the trip.

Consequently, the study results showed that the students' goals to participate the field trip partly fulfilled the level of reaching the goals after field trip. This visit to national park is so important outdoor learning in terms of contributing to the students' courses and meeting their needs resting and having fun and etc.

As indicated Achen et al. (2019), Ezechi (2018) and Guler (2009) field trips are valuable educational and social experience for the students beside courses. Since they provide having fun and relax at the same time, number of field trips should be increased by schools/faculties. These kind of field trips can be supported by the universities more financially. Also other instructors at the faculty must be willing to take field tips. Similarly, Uzel (2020) reported that the prospective biology teachers obtained new information and learnt in the natural environment in the trip. Cetin (2014) presented that the prospective biology students mostly achieved their objectives for the participation in the trip and enjoyed to participate the trip. In the study of Turkmen et al. (2016) they were pleased to Natural History Museum, Izmir since they had much fun in the Museum and they were contented to the guidance, whereas fifth grade students were not pleased in Botanical Garden, Izmir since they were not happy form guidance.

Since the brochure with QR code used in the study has additional information about national park, such as animals, specifically bird varieties, and plants etc., the students were asked to participate the trip after examining the brochures. Another interesting inference in the study was that only one student mentioned that the brochure with QR code was highly informative. In future studies its impact on the trip can be investigated by interview or questionnaire. It can be also ensured that this brochure is available at the Information Center for visitors.

In line with the recommendation of the students, though some students were satisfied with the trip so much, there were some recommendations, specifically regarding these trips should be repeated because they liked the trip because of watching birds by binoculars. On the other hand, there were some recommendations focusing on the categories of 'Observation Tower, Binoculars; Guide; Program, Duration'. The students expressed some problems about not seeing too many bird species and not seeing them more closely in the trip. There is one proposal that a glazed road can be built and observed there for a closer observation of the birds. However, it is priority for birds found permanently or for accommodation and breeding purposes not to be disturbed here. It looks better option to increase the number of binoculars and observation time should be increased in there as mentioned the students. Additionally, some students indicated that they expected to see another guide in the Tower and a zoologist should accompany with them during the trip. Bird Paradise, which is an internationally important center where bird species are constantly monitored, seems to be important in terms of both protection and promotion of allocating more budgets and improving conditions on a national scale. Though one zoologist would join to this trip and he could not attend the trip at the last minute, one zoologist should be on similar trips. There are proposals of going to different places and doing picnic on the trip too. Uzel (2020) correspondingly suggests that outdoor learning environments for prospective biology teachers focused on some factors such as a well-planned trip, informative trip, time management, and participant/teacher characteristics. To plan a well-designed field trip, some factors such as syllabus, time, distance, cost, class size, guide, whether, transportation, and permission (Munday, 2008; Yani, 2018) should be considered.

After the field trip, teachers can do additional activates such as sharing student observations and reflections to field trip experiences in a school bulletin board, website site or a local newspaper. Teachers can display replicates and photos observed by students on the field trip in a laboratory, and make a student artwork related to field work (Why take field trips? - Camp Silos, 2020).

Final suggestion, even with a qualitative method was used in this study, a quasi-experimental method (Dinata & Amprasto, 2018; Ibrahim, Surtikanti, & Riandi, 2017; Rusdi, 2019) or a mixed method (Rahmawati, Imaduddin, Haqiqi, Fikri, Fawaida, Prasetyo, & Faikhamta, 2020) can be used in future studies. This study can be repeated by a large sample group. Similar studies can be supported by several measurement tools such as observation form (Uzel, 2020), interview form (Cetin, 2014), and attitude scales toward biology and environment (Bozdogan, 2016). As this trip is so vital for the students in terms of several contribution to the students especially birds in terms of observation, social activity and lessons, the findings of the study are expected to contribute to the literature.

Last word to this paper is related to teaching profession as prospective biology teachers have experiences of how a field trip can be arranged for their courses too.

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