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Colleagues that are in editorial board worked hard to determine the articles of this issue. There are also some articles that were presented in “2nd World Conference on Educational and Instructional Studies - WCEIS, 07-09 November, 2013” with the contribution of 22 countries. Articles are evaluated by the referees that are either in editorial board or outside the board.

Although WJEIS is a new journal, it has been welcomed with interest. A lot of journals from various universities are in the evaluation process. We would like to thank cordially our colleagues who work hard in editorial board to evaluate the articles, writers who contribute to our journal and all readers.

1st February, 2014

Best regards

Prof. Dr. Zeki Kaya
Prof. Dr. Uğur Demiray
PROBLEMS AND RECOMMENDATIONS ON USING A RESTRICTED COMPUTER ENVIRONMENT FOR EXAMS ON MOODLE

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Abstract
A face-to-face learning can be used with the electronic assignments and exam on restricted computer lab environment can be stated as a good example of blended course. A variety of commercial software can be used to survey and restrict the computers on the labs. Despite this restriction technically it is not easy to prevent cheating during the exams. Learning Management System (LMS) software must also present some technical specifications to prevent the cheating. In this study we present the technical features of the software used in the computers of Faculty of Technical Education at Kocaeli University since 2004. The precautions taken on the computers and the problems encountered while the exams are described. Also the problems related to the Moodle LMS software are discussed. Requirements can be stated as follows: sharing the computer screen, restrict access to external disks, allows only access to the web page that Moodle installed, allows only selected applications to be run on computers and students can login only a computer at the same time.

Key Words: E-learning exams, LMS software requirements, face-to-face, learning aided by moodle.

INTRODUCTION

With the expand use of Internet, demand on online education is increased and at the same time properties of software systems that are used for online education are developed. Blended learning can be defined as a compound of instructions (learning) of traditional face to face learning and use of technology (Strauss, 2012). Students can reach materials on education easily with the help of technological devices, such as, tablets, mobile phones, laptops or with a group of students they can achieve assignments, projects and research.

Blended learning is not only a use of different information transfer method, but also it is to associate proper learning technologies that achieve efficiency at an ultimate level with proper learning styles and to transfer proper skills at a proper time in terms of learning gains (Singh and Reed, 2001).

There are many commercial and open source coded softwares used on web based education. These softwares can be used also as helping items on face to face education. These softwares that are used to present, observe, report and perform the administrative functions of web based educational content, are called as Learning Management System (LMS) (Ellis, 2009). Since 2004 Moodle LMS is used in Kocaeli University. How to perform Moodle at laboratory practices is explained in detail (İnner, 2007). The problems while performing Moodle and solution recommendations are also mentioned (İnner, 2009).

In the exams through Moodle, to ensure that the students do not get any help from the others or use the sources on the internet, the observers are assigned and these exams are usually performed in computer laboratories. LMS softwares support the exams through internet. It is not sufficient enough for an observer to monitor students in computer laboratories himself. Also, it is necessary to impose many restrictions on the computers. Addition to those restrictions, there are many qualifications that LMS has to provide. In this study, firstly the software that is used to prevent software problems is introduced that take place in the computer laboratories. Then, the features of two commercial softwares are used to control to observe and check the
students’ computers, transfer files, and impose restrictions are explained in detail. Also, at Moodle LMS software, possible precautions that can be taken during an exam are explained and problems are paired with the solution recommendations are presented. This research is thought to be a sample for the researchers in other universities who are willing to impose restrictions in their computer laboratories.

**Restricted Computer Environment**

On using computer laboratories, two different kind of problems might appear, hardware and software. For hardware malfunction, it needs to be applied to data processing unit and these malfunctions are not encountered very often. If the precautions for software problems are not taken, computers can become out of order. For that reason, to impose restrictions on computers is a must. In our day, most of the software problems appear because of the viruses setting off through the USBs that are used on computers. Moreover, viruses can set off by activating the programs downloaded from the internet. Apart from these, there are many problems caused by the mistakes of the user. Deleting the system files, removing installed softwares, and changing the settings of the computers are main problems that are caused by the mistakes of the user. The best solution to prevent from these kind of software problems is to use Deep freeze software which is developed by Faronics. Snell (2009) has prepared a master’s thesis explaining the advantages of using this software in computer laboratories. Cotter and Crosby (2008), by means of Deep Freeze program, have prevented the software problems that are used in computer laboratories on histology exams. Basic operating principle of Deep Freeze program is to protect the original data through installing a driver on kernel level and transferring all disc writing process to a different point. After restarting the computer, all data are restored and all software problems are prevented. Students can save their files to their memory sticks while using the computers or they can save their files in the disc compartment that is especially prepared by Deep Freeze software. After restarting the computers, all settings will revert back. Instead of this, if it is requested to have a permanent change on computers, Deep Freeze software (THAW) has to be deactivated. All changes at this stage are permanent and again these changes will stay the same (FROZEN) until Deep Freeze is reactivated. To deactivate or reactivate Deep Freeze on computers, a password has to be logged in. It will take a lot of time to apply this procedure on each computer in computer laboratories. Meanwhile, on enterprise version of Deep Freeze software, Deep Freeze software can be deactivated through the main computer. This software also enables to start computers through network by Wake-on-Lan option.

In Picture 1, console screen of the Deep Freeze enterprise version is shown. On this display, the names of the active computers, the ip addresses, mac addresses etc. are shown.

All computers can be selected and Deep Freeze on those computers can be deactivated, reactivated, restarted or switched off. It is also possible to deactivate the keyboard and mouse (THAW LOCKED) when Deep Freeze is deactivated on those computers. Thus, while operating in computer laboratories the interference of students to computers can be prevented.

By means of this software, the malfunction of the computers occured by software problems is prevented. By means of operating through network, it is easy to install what is needed after deactivating Deep Freeze. Even if it is not used for direct education, an operating program with the same principle like Deep Freeze is a must to have in computer laboratories.

**Teaching through computers and restrictions**

In classroom with the help of projector, the images on computer screen can be reflected on the curtain. Similarly, in computer laboratories students can be lectured via a projector. However, there are softwares just as to control the computers, to remote administrate, to lecture and restrict etc. and these make it possible to lecture in the classroom. As an example to those softwares Insight of Faronics, Netsupport School of Netsupport, Ntop School of Netop, open-source code ITALC (intelligent Teaching And Learning with Computers) can be given. Basically those softwares ease both to lecture and to administrate the computer laboratories. Those softwares usually have to be installed on each computer for both instructor and the student. If the computers do not have a program like Deep Freeze, there is a risk of corruption of programs and a risk of removal by the student.
After installing Insight software for instructors, a display appears on the screen as it is shown in Picture 2. Moreover, Insight student must be installed on each student computer. When installed as Insight student, software operates on background and no window appears on the screen.

Picture 1: Deep Freeze Enterprise Control Screen

Picture 2: Insight Teacher Display Image and Remote Control
By Insight Teacher software, instructor can forward his screen to all students’ computers. Students can only see the instructor’s screen and they cannot intervene their computers. Thus, the use of computer for different purposes by students is prevented during the lecture. During the lecture the instructor, if requires to do so, can show one of the students’ screen to other students with “Show Student’s Screen to Students” option. Especially in laboratory practices with the help of this option, it is possible to practice. Moreover, this software can be used to observe and check the computers of the students. Instructor can monitor the screens of all computers and performances of the students. In addition to that if it is required by the instructor, as it is shown in Picture 2, he can control the screen of a student using Remote Control option. By this way, the problem of a student in need can be solved quickly and in a practical way without going next to him.

Those softwares also provide options like transferring files to students’ computers and receiving files, restricting their computers. Insight teacher can transfer the screen or the file of the instructor to all students. Also it can gather files that are in a specific folder on students’ computers. By this way, homework can be done but using a learning administrative system will always be rational. Insight teacher provides students to access specified web sites. Access to websites other than specified ones can be prevented. It can be used as a precaution for students who prefer surfing on the internet instead of listening to the lecture. Besides, software can allow only specified applications to be operated. If it is operated apart from specified applications, application will be prevented and shut off by Insight student. During the lesson, a different application of the students will be prevented but this prevention can be removed after the class. Another important option that Insight software provides is to operate an application on the students’ computers. This option provides easiness on administrating the computers in laboratories.

Insight software becomes prominent than the other softwares with its easy and useful interface. However, displaying the students’ screens smaller while using “Remote Control” function and not providing a speed control opportunity can be said as a negative aspect. Addition to that, it does not support instructor’s voice-transmission that is taken through microphone while transferring instructor’s screen to students’ computers. Also, it does not prevent any mechanism like inserting memory sticks or DVD’s.

Display of Netsupport School software, which provides more options when compared with Insight, is shown in Picture 3. Similarly, students’ computers’ screens can be monitored by this software. However, Netsupport School provides a far better “Remote Control” function than Insight. Addition to that, while transferring instructor’s screen to students, instructor’s voice that is taken by microphone can be transmitted, too. That makes it useful for both large classes and for students who study in more than one computer laboratory.

Similar to Insight software, access can be provided to only allowed websites. If the student requires to access another site than allowed, the student faces a screen as shown in Picture 4. Accessing websites, apart from the websites that learning administrative system is on, can be prevented and that can allow students focus on the lesson. In similar, it is allowed to operate only some permitted applications. By means of these options, a safe computer environment is tried to be prepared in an exam. Another function that Netsupport School software provides is that the access to USB’s and DVD’s on students’ computers can be restricted. By means of this software, it can both allow to read and access can be completely prevented. It is monitored that students share their homework either on web or through memory sticks, while doing their homework. To prevent these, students’ access to internet and memory sticks can be restricted during the class and they are allowed to use the computers on their will after class.

The list of files on students’ computers can be seen on Netsupport School software but Insight does not support this option. Moreover, on Netsupport School software the sound level of the students’ computers can be regulated, if required, the sound can be turned off completely. Netsupport software is not designed only for computer laboratories. It gives an opportunity to students to use their computers also through internet. Thus, software can be used in concurrent education. The qualification of the instructor’s screen can be adjusted automatically according to link speed and that can provide a faster communication capability. By means of this software, it is also possible to make a questionnaire and simple exams.
Netsupport School software is not advantageous only for education, but it is more advantageous for administrating and maintenance of computer laboratories than Insight software. Through instructor’s computer routine controls of the students’ computers can be performed and Windows can be updated. By transferring files to computers, it is possible to install programs.

Picture 3: Netsupport School Monitoring Screen

Picture 4: Netsupport School Allowed Websites
Exams Via Moodle

One of the computer laboratories of Kocaeli University is shown in Picture 5. When the exams are given through Moodle, students are placed in one or two computer laboratories and they take the exam in a restricted computer environment. During the exam some restrictions are imposed via Insight or Netsupport School softwares. The website address is adjusted as eds.kocaeli.edu.tr. Addition to that, Microsoft Internet Browser (Internet Explorer) added to operating application list. Thus, research from internet and get help from the files during the exam are prevented. Also access to memory sticks is also prevented during the exam. Students’ computers are constantly monitored by instructor’s computer.

In addition to those precautions that are taken during an exam, some other precautions are taken through Moodle learning administrative system. On settings of an exam, a password can be designated and this can enable only students with a password attend the exam. Despite a restricted computer environment, a student attending an exam with a nonrestricted computer can cause unpleasant situations. To prevent this, if it is required to take the exam only through the computers in the computer laboratory, the net settings must be adjusted as shown in Picture No.6. For instance, in Picture No.5, computers’ ip addresses frequency in the computer laboratory can be 10.20.4. In that case, adjustments can be done as 10.20.4 as in Picture No.5. As the computer, that the student has and using the wireless net the school provides, gets a different ip address from an ip pool, so that attending the exam will not be possible.
Exam Restrictions Through Moodle

It is possible to set the screen to show the student’s photo on the screen by screen settings. As it is shown in Picture No.7, the photo of the student will be displayed on the screen while answering the test. Addition to that, how much time is left will be on screen, too. If a problem shows up during the exam, such as, if the internet browser shuts off, the student can continue the exam. But this function can be abused by the students. During the exam, a student can sign out and again sign in by another student’s account and can answer another student’s exam. In Moodle learning administrative system, it is possible for a student to sign in from different computers at the same time and there is no way to prevent this. It is not possible to prevent this and along with that to confirm this, Moodle provides the records to be investigated. On records about the exams, the data that at what time the student takes the exam and which ip address is used is saved. Moodle provides these records in an Excel file. These records that are downloaded as an Excel file collocates to find out whether more than one student signed in using one ip address and this un-solicited status can be established easily.
CONCLUSION AND SUGGESTIONS

Different softwares need to be used along with to be able to get a restricted computer environment. It is a fact that software problems can appear while the students using the computers. The ultimate risk is the viruses setting off from the students’ memory sticks. In addition, setbacks in education may occur because of the students who delete the critical files of operating system and change the settings. It is observed that Deep freeze software which will prevent the software problems has been preferred. With this software, all the changes are recovered when the computers are restarted. By means of using this kind of software, computers which run properly supersede those which continuously break down, and there will not be setbacks also in education.

Besides the restricted computer environment, softwares that provide convenience also in education is needed. Instructor’s computer screen has to be able to shared out of the other computers, a selected student’s computer screen can also be shared out of the other computer screens. With this option, instructor can give a lecture through computer conveniently, give an opportunity to students to be able to reinforce the subject and then can continue the lecture. In addition, when the instructor make the students practice, that the students make practice together can be provided by sharing out one’s computer. Moreover, It can be possible to show that the instructor helps a student having a problem, and to show encountered problem and its solution to all students.

An option should also be presented for file transfer to students’ computers and the collection of the files from the students’ computers. For this process, LMS can be preferred but there might be homework with big file size. In such circumstances, the evaluation can be carried out by collecting the homework prepared by the students on the instructor’s computer swiftly by courtesy of the software.
During the exam, monitoring the students may not be enough just by the instructor. Students’ computers should be monitored from the instructor’s computer. Moreover, in course of exam, just the applications which is allowed should be activated and access to allowed websites should be provided. If a restricted environment had been prepared by disconnecting all the internet, it would not have been possible to access any of the websites of LMS such as Moodle. This restriction progress should be imposed easily in the course hours and should be cancelled except for the course hours. The access of the students to USBs needs to be restricted as the network file sharing of students with each other will be precluded. During the exam, the use of DVDs, memory sticks and printing need to be restricted. However all the softwares in the market cannot present these kinds of options.

Using these kind of softwares both enhances the quality and saves time. Moreover, it eases the processing of maintenance and management. Installing the new softwares on computers can be done practically.

It is not encountered to a software that provides all mentioned options above. For instance, DeepFreeze and Netsupport school make it possible to obtain a restricted computer environment with more than one software. Despite of that, problems can occur during the exams. Moodle LMS is designed and developed as web-based distant education system. Therefore, a mechanism preventing a user’s login the system through more than one computers is not provided. It is observed that the students login from each other’s accounts in the exam. A mechanism preventing this is not provided yet. However, to confirm this, a report option provided by Moodle is used. All records saved by Moodle are transferred to Excel software and IP addresses can be monitored during the exam. Thus, it is possible to confirm if more than one student logs in one computer. With this option, to login more than one computer has to be prevented directly by LMS and if the entry is done on one computer, the same entry on the other computer has to be deactivated.

Also, if more than one user log in through one ip address during the exam, a warning has to be established. When these options are established a safe exam environment will be set.

It is obvious that an exam established in a restricted computer environment provides more monitoring opportunity than traditional exams. However, instructor’s proficiency in the use of restriction softwares is the most important factor that effects cheating in an exam. If the instructor is capable of using technology appropriately, the instructor has the opportunity both to observe and evaluate the exams practically and the results of the exams are announced immediately.

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**REFERENCES**


THE IMPACT OF TEACHING REFERENCE CATEGORY AS A SUBDIVISION OF GRAMMATICAL COHESION ON IRANIAN EFL CONTEXT

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Abstract
Based on recent studies on cohesion, some scholars believe that there is a positive relation between teaching cohesion, reference, in this case and learners writing quality. Therefore, this study aims at investigating the relationship between teaching reference through simple prose to Iranian intermediate EFL learners and their writing improvement in terms of the correct use of this cohesive tie. Sixty Iranian intermediate EFL learners were selected to participate in this study. A pretest was also administered on the writing ability of participants prior to the treatment. Twelve sessions of instruction each lasting for about 60 minutes comprised the whole treatment to the learners. After the treatment, a post-test was conducted to determine learning improvement compared to pre-test. The results of the study through independent t-test revealed that, there was no significant relationship between teaching of reference as a cohesive device and the writing quality of Iranian intermediate EFL learners before and after the treatment. The findings of the present study although did not reveal any statistically significant results, they showed an indication of the efficacy of the treatment. Therefore it is suggested that definitely more emphasis should be placed on teaching of reference during the practices of TEFL.

Key Words: Cohesion, Reference, EFL Learners.

INTRODUCTION
According to relatively recent findings in communicative contexts, text is formed of various but connected elements which are semantically and syntactically connected. In order to distinguish these connections, cohesion and its subdivisions that have been under investigation by many linguists for years play an important role in text analysis. Cohesion as a fundamental issue in text processing alongside its subclasses like ellipsis, substitutions, etc had been under investigation by many discourse scholars (Halliday and Hasan 1976; Bartkutė 2005). Cohesion is an important factor for readers and writers in order to create and understand texts and it has been emphasized by teachers in their teaching and writing evaluations (Liu & Braine, 2005).

The role of cohesion is to connect parts of the same text. Subsequently, it supplies continuity to the text. Accommodating this type of text continuity, cohesion authorizes the reader or listener to afford all components of the picture to its understanding. Cohesion in its usual form is the presupposition of one thing that has gone in the discourse previously, whether in the immediately preceding or not (Halliday & Hasan, 1976).

Based on Rashtchi and Gharanli (2010), input enhancement is a technique which can be used to draw the learners’ attention to some grammatical features of input and also to increase the perceptual salience of the structure. Since Faghih and Esmaeili-Fard (2010) found that cognitive strategy-based grammar instruction did not affect Iranian intermediate EFL learners’ development of structural knowledge significantly therefore the
present investigator will attempt to teach English discoursal cohesive markers through simple prose to Iranian intermediate EFL learners in order to determine the impacts of using prose (texts) as explicit input in learning and using of English cohesive ties in their writings.

**REVIEW OF RELATED LITERATURE**

**Cohesion**

Text cohesion includes the affiliation among words, their sensations, and it refers to expressions which govern the connected level of text, and also it determines ties which are used to show semantic correlations. Text cohesion includes lexical cohesion (hyponymy, reiteration, etc) and grammatical cohesion (ellipsis, substitution, etc). There is reason (Irwin, 1980) that more cohesive ties have impacts on the summarizability of texts (Mani, 2001). (cited in Brown, 2005).

Cohesion refers to the grammatical or lexical correlations between various parts of a text which may be the correlation between sentences or parts of a sentence (Salehi, 2005). Different parts of sentences are related to each other by means of grammatical and lexical cohesion.

Cohesion considers the meaningful connection of linguistic elements in composed texts based on grammatical rules of each language (Malmkjær & Anderson, 2006). Generally, cohesion when compared with other general concepts like grammar, content and text length is more professional and almost uncommon for many people. Cohesion explains micro-local level of organization between individual clauses and also makes connections between these clauses (Bae, 2001).

As mentioned above cohesion can be categorized into distinctive labels; reference, substitution, ellipsis, conjunctions, and lexical cohesion. It is proven that the information behind these categories is hypothetical but it provides an applicable means to describe and analyze the texts. In text, these categories are determined by some characters; repetition, omissions, existence of especial words; which all of them determine that the interpretation of a text is dependent on other constituents (Cook, 1989; Halliday & Hasan, 1976, 1989; McCarthy, 1991; Renkema, 1993). One of the most important factors in cohesion which has been located under grammatical cohesion is reference category which is summarized below.

**Reference**

In reference, fetched information is referential meaning; the existence of specific thing which is turned to; and cohesion belong to the connection of reference, by means of which similar thing comes to discourse for the second time.

It is useful to share some information which used to name situational reference. This is exophora reference and it could be compared with endophoric reference within a text:

Reference

- Situational (exophora)
- Textual (endophora)
  - to preceding text (anaphora)
  - to following text (cataphora)

As a common formulae, reference terms could be exophoric or endophoric and endophoric is divided into anaphoric or cataphoric. This kind of design makes it possible to admit special divisions inside of the set of reference items, based on their various functions (Halliday & Hasan, 1976).
An exophoric item doesn’t name anything but indicates that reference have to be made in the context of the situation. Exophoric and endophoric reference contain a rule to return to the essential information from the other place in order to interpret a passage and a reference item is neutral in isolation. Personal, demonstrative and comparative references are three kinds of references. (See Appendix A)

**Personal Reference**

Personal reference is a kind of reference based on the function. Personal reference contains the three sets of personal pronouns, possessive determiners and possessive pronouns. In traditional grammar, there was no name for personals, since the members of this category related to various groups of distinct structural roles but principally they indicated a single system: person (Halliday & Hasan, 1976, p. 44).

<table>
<thead>
<tr>
<th>Speech roles</th>
<th>Other roles</th>
</tr>
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<tbody>
<tr>
<td>Speaker</td>
<td>Addressee</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>one</td>
<td>I me mine my</td>
</tr>
<tr>
<td>more than one</td>
<td>we us ours our</td>
</tr>
</tbody>
</table>

All of these items are reference terms. They refer to things in order to define their purposes in the speech situations. This system is called person, which traditionally is divided into first person, second person and third person, of course they are also divided with numbers: singular and plural (Halliday & Hasan, 1976).

Persons are to some extent deluding, since this system contains not only impersonals (human, non-individualized) but also reference that is correctly non-personal, i.e., refers to objects. But most of the grammatical items have distorted borders. They explain the chief meaning of the class under investigation, and are defined to be easy to remember. The option would be absolutely unrealistic, like letters and numbers or one would have to aspire more authentic classifications, which would become awkward and syntactically incorrect. This approach is not part of a linguistic theory but is used as an address to convalescence (Halliday & Hasan, 1976).

**Demonstrative Reference**

This kind of reference is necessarily a form of verbal pointing. The speaker classifies the referent by locating it on a scale of adjacency. The system (Halliday & Hasan, 1976, p. 57) is like:

```
[neutral] the
          [selective]
            [near]
              [far (not near)]
            [participant]
              [place:]
                [time:]
```
The adverbial demonstratives *here, there, now, and then* refer to the place of a procedure in space or time and are usually directive too, not through placing person or object which participates in the procedure. So they work as adjuncts in the clause, not as the elements inside of the nominal set. They also play some secondary role as qualifiers. All other remained nominal demonstratives *this, these, that, those* refer to place of something in the procedure, for this reason, these elements happen inside of the nominal group (Halliday & Hasan, 1976).

Demonstratives like personals commonly turn to something exophorically inside of the context of situation. It is the basic form of verbal pointing, and it coincides with demonstrative action, like a sign which shows the thing which is referred to (Halliday & Hasan, 1976).

Demonstratives like *this, these, that, and those* develop widely with anaphoric function in all forms of English. Principally, they contain three systematic distinctions inside themselves:
1. Between near (this/these) and non-near (that/those)
2. Between singular (this/that) and plural (these/those)
3. Between modifier (this+noun) and head (this+Ø)

These differences are somehow related to cohesion, in a way that they functionally ascertain the use of these items in textual (endophoric) reference (Halliday & Hasan, 1976).

Moreover, *here, there, now, and then* are demonstratives but *now* is merely cohesive. These need to be categorized from their homographs which are written similarly but function differently: (1) demonstrative *there* should be recognized from pronoun *there*, (2) demonstrative *now* should be distinguished from conjunction *now*, and (3) demonstrative *then* should be categorized from conjunction *then*. Although there is no phonologically difference between demonstrative *then* and conjunctive one, but there is a common structure which states that non-demonstratives are phonologically reduced while not demonstratives (Halliday & Hasan, 1976).

**Comparative Reference**

In the following system (Halliday and Hasan, 1976, p. 76) two types of comparative reference are distinguished.

(1) **General comparison**: It does not take account of any special feature; it refers to the comparison based on similarity and dissimilarity. Two things could be similar, different or the same. This category is defined with special group of adjectives or adverbs. The adjectives operate as deictic or as epithet in nominal group; they have different meanings. The adverbs function as adjunct in the clause. These items which are called adjectives or adverbs of comparison are differentiated from comparative adjectives/adverbs that are the comparative form of common adjectives and adverbs (e.g., shorter, longer, etc) (2) **Particular comparison**, on the other hand, refers to comparison that is essentially quantitative or qualitative. It is defined by the use of comparative form of common adjective/adverb(s) and not of particular category. The adjectives which function inside the nominal group are either numerative or epithet and not of diectic. The adverbs function as an adjunct in the clause, as an epithet, as a numerative, or within an adjunct. Whether the comparative adjectives or adverbs are inflected, makes no difference, i.e., meaning and function are not affected by this...
division. Such an approach is applicable with comparison of other forms of reference, it can be anaphoric and cohesive or it may be cataphoric (Halliday & Hasan, 1976).

Some studies on Cohesion
In a study in China, the findings revealed that lexical devices took the highest position (55.6 %), reference devices (19.8 %), and conjunctions (14.6 %) in the argumentative writing of Chinese undergraduate non-English major. Also, based on the qualitative analysis of compositions, it found that among three sub-classes of reference devices pronominals (60 %) were the most frequently used devices, and demonstratives (4.6 %) least used. Using conjunctions indicates that students were able to connect new sentences with the previous ones in order to make their writing clear. Most commonly used items such as and, but, or, and so were the students’ favorites, and others like furthermore, on the contrary were barely used. Chinese undergraduate non-English major students used lexical cohesion extensively but their hardly used synonyms, antonyms, and superordinates indicated that teaching vocabulary in China needs to be improved (Liu & Braine, 2005).

In a study by Chen (2008), the findings revealed that learners employed a variety of cohesive devices in their essay writing. Among the three cohesive devices, lexical devices were the most frequently used, followed by reference devices and conjunctions.

METHOD

Participants
The population from which the subjects of the present study were chosen included Iranian junior EFL students of English translation at Neghab’s Payam-E-Nour university. They were students of first semester who had studied English text books introduced by Iran’s ministry of education before being accepted to this university. The total number of participants in this study was sixty and since two groups were needed for this study, i.e. experimental group and control group, learners were divided in this manner: thirty participants: fifteen males and females were selected as the control group and thirty others with the equal division of fifteen males and fifteen females, were assigned to the experimental group too. The participants were selected according to stratified random sampling, and there was no age limitation in this way of division, and also all the learners had the same mother tongue, i.e. Persian.

Instruments
This study made use of some instrument for the purpose of data collection:
1. First of all, a proficiency test was held in order to homogenize learners’ level of proficiency. The test selected for this purpose was Preliminary English Test (PET) by Cambridge University Press (2009). The allocated time for this test was 120 minutes. Passing score for this test was between 70-84 and pass with merit score, ranged from 85 to 100.
2. During the pre-test as one of the fundamental steps in this study, in order to measure participants’ abilities in writing before the treatment, descriptive paragraph writing was assigned to the participants to write on the subjects selected by the researcher. The selected source for this part was Academic Writing of IELTS (2010). There were two tasks in this writing:
   Task1. Participants needed to write at least 150 words about the information of a table or a graph in about 20 minutes.
   Task2. They were required to write an essay in 40 minutes and in about 250 words on a subject matter.
3. The other instrument used in this study was prose texts. Texts were selected because the focus of the present study was on teaching English discoursal cohesive markers through simple prose. These texts were chosen from the following books:
   1. Introductory Steps to Understanding (1998)
4. A post-test based of IELTS Academic Writing, in 60 minutes (20 minutes for task 1 and 40 minutes for task 2) was assigned to the participants in order to determine the amount of learners’ progress in writing at the end of the experiment. Since the main focus of the present study was based on discourse markers, there was a need to measure these markers in two processes, first in the pre-test and then in the post-test. The comparison of pre-test and post-test results indicated the amount of progress the learners had made.

Procedures
To conduct the experiment, twelve sessions with every session lasting for about 60 minutes were needed. Two texts were taught to students every session as treatment. For the first session the proficiency test of PET by Cambridge University Press (2009) was administered to learners in 120 minutes and also the investigator introduced the study and its purposes to the participants.

For the second session a pre-test based on IELTS Academic Writing (2010) was administered to both groups of experimental and control, on two tasks and in about 60 minutes.

At the third session and before presenting texts (prose) to the participants, the present investigator explained some cohesion ties that learners had learned in their last years of studies like pronominals, and he also gave a general explanation for English cohesion and cohesive markers to the participants. The first category which was introduced in the third session was reference. The researcher explained about reference in about 10 minutes and wrote some examples on the board about the subject matter, and also to make it clear he showed some examples of reference in the participants’ texts. The introduced materials were pronominals, proper nouns, demonstratives, and comparatives. Other sessions up to the tenth session went on practical use of reference items.

The participants needed the researcher’s assistance at the eleventh session and before the final examination in order to: (1) to check the progress of the learners during the studying process about the marked discoursal cohesive markers (2) to solve their remaining problems within sentence connectors (3) to help to organize their thoughts about finding cohesive devices in selected texts (4) to monitor their progress in the process of teaching cohesion and finally (5) to find out if everybody in two groups had understood cohesion ties or not.

The procedure finished at the twelfth session by administrating a post-test based on IELTS Academic Writing to both control and experimental groups in about 60 minutes. During post-test the following tasks were suggested to learners to write on.

RESULTS AND DISCUSSION

Pretest
The first stage during the statistical analysis of the findings of the study was to scrutinize the results of the pre-test in order to check the degrees of similarity at proficiency level of participants in writing and at the same time to determine the impacts of treatment when post-test is compared with the results of the pre-test. The writing section of IELTS was administered to both groups of participants and the following data was gathered: In order to achieve most valuable data means differences an independent t-test was applied and following information was revealed:
Table 1: Independent Samples Test for Pre-Test

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>t</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.913</td>
<td>.343</td>
<td>.715</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.715</td>
<td>.914</td>
<td>57.4</td>
</tr>
</tbody>
</table>

It is shown that at 58 degrees of freedom the amount of level of significant is .477 and since .477> p = 0.05, then there is no great statistical distinction between results of control and experimental groups performances. Since the most emphasis of this study is on cohesive devices, especially reference, the analysis of cohesive categories was applied in pre-test too. First, all reference devices was numbered in the participants writings in pre-test tasks and then the descriptive statistics was conducted on cohesive side of their writing.

And finally in order to check the mean differences between two groups a t-test was applied on the cohesive devices of both groups in pre-test and the following information was found:

As it is shown in the Table 2 the difference in mean is small, but to gain more details the following table calculations were also carried out:

Table 2: Independent Samples Test of Cohesive Devices for Experiment and Control Groups in Pre-Test

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>T</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>1.978</td>
<td>.165</td>
<td>.171</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.171</td>
<td>56.235</td>
<td>.865</td>
</tr>
</tbody>
</table>

There is no significant difference between means of two groups since at df =58, p=.865>0.05, then the number of cohesive devices in two groups are almost homogeneous.

Post-test

In post-test an IELTS writing section was administered to the participants in order to assess their progress as a result of the treatment of the present study. Specially, the purpose of the post-test was to examine the amount of scores dispersion after the treatment. The following information was gathered from the post-test.

Obviously in comparison with the pre-test, participants had some progresses in their writing because of some instructions on cohesive device. Of course the mean of the experimental group which was exposed to simple
prose in order to learn cohesive device was higher than their mean in pre-test but the result of their means comparison was not significant. The following table reveals that there was not a treatment effect on the groups’ performance, since in 58 degrees of freedom with the amount of $P$-value at 0.05 level of probability, the level of significant was .101 which is higher than $P$ Value, i.e., .101 > 0.05. Thus it can be understood that while the mean scores of the experimental group in post-test was more than the mean scores of control group but there was not sufficiently remarkable differences between these two groups on the post-test. It is also realized that the explicit teaching of discoursal cohesive marker through simple prose does not have any effect in participants’ performance in writing.

Table 3: Independent Samples Test for Post-Test

<table>
<thead>
<tr>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levene's Test for Equality of Variances</td>
<td>t</td>
<td>df</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1.664</td>
<td>57.224</td>
</tr>
</tbody>
</table>

To check the differences of mean scores for two groups the following t-test was applied:

Table 4: Independent Samples Test of Cohesive Device for Experiment and Control Groups in Post-Test

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levene's Test for Equality of Variances</td>
<td>t</td>
<td>df</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.093</td>
<td>.762</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1.752</td>
<td>58.00</td>
</tr>
</tbody>
</table>

In this analysis, the level of significant is .085 which is more than $P$-value, i.e. .085 > 0.05. In the case of cohesive device, the treatment had a great impact for participants in using more quantity of devices in post-test in comparison with numbers of cohesive device in pre-test, but the amount of its affection on the writing abilities of participants in both groups was not significant.

DISCUSSION

This study aims to signify the relationship between teaching references through some texts in order to measure the strength of this kind of method to increase the learners’ knowledge of reference category. The findings of the data analysis revealed that teaching references does have significant effect on the knowledge of references
of those learners taking part in this program. And finally the analysis of the data based on the comparison of the number of references, which were used in pre-test and post-test, the following information was gathered:

<table>
<thead>
<tr>
<th>Cohesive Device</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference</td>
<td>2775</td>
<td>3226</td>
<td>8.33</td>
</tr>
</tbody>
</table>

CONCLUSION

This study had two main purposes: (1) to check the possible increase in the frequency of use of cohesive device, reference, after the treatment by the learners, (2) to check learners’ progress in writing skill after applying the treatment. The present study examined the role of simple prose in teaching cohesion for the Iranian EFL learners. The findings of the study revealed that (a) there was no significant relationship between teaching discoursal cohesive marker resulting in improvement of writing. This finding was arrived at as a result of analysis of the numbers of cohesive device which was used by the participants in pre-test and post-test, and also an independent sample test held in order to check the mean dispersion of two groups in progress. And (b) this study also found that the high frequency use of cohesive device in learners’ writing did not have any significant impact on the participants’ writing ability, since on the basis of statistical data the mean scores of the control and experiment groups were almost similar. As a result, the major finding of this study was that there is no significant correlation between frequent use of cohesive device and writing quality.

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WIKI-LEARNIA: SOCIAL E-LEARNING IN A WEB 3.0 ENVIRONMENT

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Abstract
The current trend in the Massive Open Online Courses (MOOC) is characterized by providing content to an extraordinarily high number of learners. However, no or inadequate communication and cooperation mechanisms tarnish the learning experience, which is considered as one of the main criticisms.

Social networks as a Web 2.0 technology have become a popular information exchange medium which is characterized by diverse, intuitive communication services. Wiki-Learnia as an e-learning 3.0 platform goes one step further by also transparently integrating external portals such as Facebook, Twitter and YouTube. The learner focuses on the essentials and cooperating over different communication channels in parallel to transfer knowledge. Here, not only the usual dialogue between two learners or between teachers and learners should be encouraged, but there’s also the intrinsic motivation to organize learning communities. The resulting cross-network information exchange has a strong positive effect on the teaching and learning experience of the community.

Wiki-Learnia serves as an information hub for the communication channels of the linked systems. With the help of various semantic filtering mechanisms, the information overload is contained and relevant knowledge is extracted, acquired and distributed. As an integral part of the cross-network search of Wiki-Learnia the information research of the learner as well as the author is facilitated, which in turn supports the firmly in Wiki-Learnia’s philosophy anchored crowdsourcing principle.

Key Words: Social networks, e-learning 3.0, e-learning hub, mooc, semantic filtering.

INTRODUCTION

In times of increasing demands in the workplace and a shorter half-life of knowledge there is an urgent need for flexible, easily accessible knowledge acquisition, an extra-occupational further education on demand and just in time. Here, as soon as possible innovative life-long learning strategies are needed to counteract both the consequent shortage of skilled employees as well as overall demographic change. Wiki-Learnia as an innovative project will help to eliminate these deficits, particularly in the STEM area.

In the current international trend Massive Open Online Courses (MOOCs) try to establish. In addition to a number of positive effects on the perception of e-learning, negative criticisms become more and more burdensome and may not be resolved yet. Particularly relevant defects are the most lacking or insufficient
communication and cooperation mechanisms. Other advantages and disadvantages of MOOCs are explained in more detail in the next section.

To the conceptualization of Wiki-Learnia the shortcomings of the existing methods have been recognized under the original analysis and have been included in the e-learning 3.0. Plattform.

**MASSIVE OPEN ONLINE COURSES**

In this chapter, the trend of MOOCs is explained in detail and the typology is presented.

**Definition**

The term 'MOOC' goes back to the course "Connectivism and Connective Knowledge" by George Siemens and Stephen Downes in 2008, who carried out this course for 25 local students and additional 2200 online students. Today there are a number of MOOC portals, which recorded a hundred to a thousand times more participants. For example the platform EDX advertises more than 60 learning modules including the Massachusetts Institute of Technology (MIT), Harvard University and the University of California, Berkeley, and has over one million users (as of August 2013) (http://www.educationdive.com/news/moocs-by-the-numbers-how-do-edx-coursera-and-udacity-stack-up/161100/) Other examples of this magnitude are Coursera with over 400 courses and an attendance of over 4 million or Udacity with over 30 courses and 750,000 users [4].

"Massive" thus implies the goal of addressing a broad audience with MOOCs. The number of students should be as high as possible. An exact threshold is so far not given. Some sources use the Dunbar (1992). number (about 148 people) as a measure. This describes from a neurological perspective, the maximum number of people to which a person can build a bond (relationship) permanently.

"Open" points out the free access of the course, which is met by a user-friendly and informal access to the system without particular conditions. The interested person registers with his e-mail address, a user name and password and immediately gets access to the courses. However, this simplicity of registration generates the problem of lack of authentication. That's why a possible certification of learning outcomes is difficult from the outset.

"Online" refers to the use of the Internet to allow the extremely high number of participants. All MOOC portals try to hold low the technical requirements on client-side. Often videos are used, which are mostly hosted on the platform YouTube and are just embedded into the course. On the one hand, this reduces the server administration costs and on the other hand it increases the reliability on different client systems. Furthermore, mobile devices are supported by adapting the user interface, to ensure ubiquitous learning.

"Course" indicates that the content is mostly available in a curriculum. Usually, they are based on the lecture notes of the corresponding universities, which are often adapted for e-learning.

**Critical review**

Already indicated in the previous section, MOOCs as the latest e-learning trend have significant benefits. As showed by the example edX, MOOCs offer free access to high-quality teaching materials from renowned universities. Content will be distributed via an online platform, so that users can choose when and where they learn. In general, it is optimized for mobile devices ("mLearning"), so that work can continue on the road. In addition, the user can achieve a certificate for his curriculum vitae. Thus, MOOCs offer a flexible way of extra-occupational education and training for lifelong learning.

Despite these advantages, a number of deficits are often discussed. All in all, the e-learning materials are just refurbished lecture notes, which were designed for conventional classroom instruction ("chalk and talk"). Often, the content consists only of simple text slides associated with video recordings of the lectures, as well as self-test exercises to control the learning success. There is no dialogue between teachers and learners. Generally, there is no individual mentoring. Users who do not understand the course are left to rely on
themselves. This fact is especially favored by inadequate or even missing cooperation and communication mechanisms.

Another outstanding issue concerns to the value of the acquired certificates. Can they be credited to a study program at a university? If yes, which universities? Which potential employers will ever know MOOCs and how they rate the certificates?

As a solution to the criticisms and to answer the open questions, Wiki-Learnia as an e-learning 3.0 platform for lifelong learning will be presented in the next section.

WIKI-LEARNIA

Before some concepts and features of the new learning platform are presented, there’s an introduction of the overall project, in which Wiki-Learnia is included.

Computer engineering online

The joint project Computer Engineering Online is a cooperation between German universities with the common goal of developing and introducing online learning opportunities in the field of technical computer science. Background of this project is the growing shortage of skilled workers in the STEM area in Germany. In 2012, approximately 210,000 professionals were absent. Especially in the IT sector, there were about 43,000.

In addition to particular courses for individual training, a complete bachelor's and master's degree of computer engineering was designed. In a blended-learning approach the major part of the study program is available via an online platform, which provides the interactive and multimedia content. These consist of scripts, enhanced with animations, videos, self-test exercises, simulations, virtual labs and many more.

The master's degree is designed as a MOOC, so a suitable platform is required for distribution. To avoid the already identified shortcomings of current MOOC portals, a novel e-learning 3.0 platform called Wiki-Learnia to create and publish MOOCs in a social learning environment was created.

Learning in a web 3.0 environment

To counter the described point of criticism (see section II b) of insufficient communication and cooperation opportunities in popular MOOC portals, extensive Web 3.0 technologies are used in Wiki-Learnia.

As the name suggests, Wiki-Learnia is based on wiki software which also serves as the foundation of Wikipedia or Wikiversity. This enables a fast ("wiki" is Hawaiian for "fast") and uncomplicated cooperation between several users of the community in the preparation and processing of learning content.

By integrating a WYSIWYG editor the learning of a special syntax isn’t required. The user can write as he knows from casual office applications. For example, texts can be marked as bold or colorized by the touch of a button and images can be added by drag and drop from the local hard disk. The MediaWiki software in the background merges the changes of all users, while providing a versioning mechanism in order to undo changes and look at older versions.

Basically, all users in Wiki-Learnia can create and edit all the content. This approach is used for quality assurance because the community continuously corrects, adds and updates the learning modules. That crowdsourcing works, is shown for example by Wikipedia, which is the most widely used online encyclopedia for years and currently at number 6 of the most visited sites world-wide. Similar to Wikipedia, there is the concept of sighted learning modules in Wiki-Learnia to prevent vandalism. Only after a certain number of regular authors have highlighted the content for free from obvious blemishes, the learning module is released.
for the remaining community. Unlike Wikipedia there is also the attribute "approved content", which indicates that this version is classified as factually correct by technical experts.

For a better coordination of the authors, the MediaWiki-based principle of talk pages was revised. Previously, if any article was created, at the same time an appropriate discussion page was launched automatically which is processed in the same manner as the main content. Each user can edit the text, change user statements and thus distort the actual individual statement or even delete it. For this reason, it’s complicated to have structured conversations. That’s why in Wiki-Learnia another concept is used. When a new article is created, a new thread will be initiated automatically in the fully integrated forum. Each answer can be assigned definitely to the corresponding user. Also, it can be answered or referenced directly. Authors with special privileges can coordinate the discussion. Moreover, not only author discussions about particular articles can take place in the forum, also the overall context such as the link between individual modules, categorization or naming can be discussed. For this purpose, there have been no separate discussion pages in the standard wiki software. Furthermore, any conversations can be held in the forum, whether it’s a discussion about specific learning issues, the clarification of questions regarding specific content of learning modules, help with homework or debating about the current state of research of his favorite specialty. Forum posts can also be inserted as excerpts in Wiki-Learnia learning modules. This, for example, may directly provide answers for frequently asked questions. This feature also favors the processing of cMOOCs in which learning takes place mainly through networking and discussions among the participants.

To distinguish users, each member of Wiki-Learnia has a unique name embedded in a social profile after registering. Additionally to photos and personal information, each user can set a personal learning target which will offer many new opportunities within Wiki-Learnia. For example, users can search other members not only by their name but also by their learning targets and connect with each other to build up learning communities. An integrated bulletin board in the social profile page provides the exchange of public or private messages.

A further possibility for taking private conversations is the built-in messenger. Group chats of any size can be realized. The initiator has special privileges to set and change the group name, for inviting and removing users, and granting these privileges to other group members. Similar to a mailbox the user can browse all messages. At the same time new messages are indicated directly in the Wiki-Learnia interface. The user can respond immediately by taking advantage of the live chat feature from the sidebar, which is available on each page. The online status of each friend can be viewed at any time.

In addition to a textual chat, the Wiki-Learnia service “DiaLook” offers audiovisual communication. Via WebRTC (http://www.webrtc.org/), an open standard for real-time communication within a Web browser, users can communicate directly with each other using video telephony without installing additional software. An integrated signaling server connects the communication partner, which use a peer-to-peer data transfer. The bidirectional transmission of audio and video enables live lectures as well as a video chat with more than two people. DiaLook is an instrument to support learning and teaching for c and xMOOCs.

Besides the described Mediwiki editor which allows collaborative editing of texts, Wiki-Learnia offers a blogging feature. Each user can write individual blogs on any topic, which can be commented and rated by other participants. This offers interesting discussions among learners and provides feedback.

In addition to public editing of learning modules a personal editing of the content exists. In analogy to annotate a printed script, users can select and annotate text. Due to the crowdsourcing approach (each user can create and edit content), the learning content can change periodically. An intelligent algorithm ensures that all notes keep their semantically correct position. Users can edit or delete notes at any time. There is also the opportunity to share annotations with friends.

Another way of individualization of the learning content is the tool "Summarizer". Using this function, users can create summaries of the learning materials saved as separate notes. For this purpose, they simply highlight the desired items of several different articles which will be combined in one summary. This can be edited in a WYSIWYG editor, by changing, deleting, adding and formatting the content. The final summary can then be
printed and downloaded in PDF format or as a mobile app for smartphones. Furthermore, the individual documents can be shared with friends within Wiki-Learnia and then edit collaboratively.

All this functionality for creating or editing content within Wiki-Learnia is statistically significant for the users in their social profile visible to others. Each action is awarded by a certain amount of points. The total score and, corresponding to this value, rank (e.g. "beginner", "advanced" or "expert") will also be presented on the profile page of the user for the community. Users should be motivated in an easy way to work actively with the system. The gamification idea is complemented by the ability to collect trophies, which rewards the enthusiasm of the users.

In the previous section many features have been introduced, which are characterized Wiki-Learnia as a social network. Users can present a social profile to other participants and communicate with each other through various channels (e.g. bulletin board, chat, forum, video telephony) and edit, share, comment and rate content. Well, Wiki-Learnia goes one step further. Other social networks like Facebook, Twitter and Youtube are involved in the concept. For this purpose, the user must first connect the required accounts with their own Wiki-Learnia account to exchange data between the platforms. Messages and wall posts can be sent, received and commented across the social networks. This supports the formation of learning groups that extend beyond the boundaries of Wiki-Learnia. Users can share learning modules on Facebook or Twitter and comment embedded Youtube videos.

![E-Learning Hub](image1.png)

Figure 2: Semantic filtering 1

An e-learning hub (see figure 1) is a focal point on the Internet, which involves different repositories and filters, aggregates and distributes the information on a specific learning topic.

Thus, the e-learning hub component has interfaces to various worldwide repositories such as MOOC portals, online encyclopedias, news sites, video sites and also social networks. The user gets access to the data of the connected entities via the social network of Wiki-Learnia. Since there is an abundance of daily content, it needs
some mechanisms to stem the flood of information. Using semantic filtering algorithms, which based on keyword matching, synonyms and ontologies, the user gets delivered only the information that is required to achieve his individual learning goal. For example, the user can show all Facebook messages of his friends at once or only those which relate to his learning topic. In addition, a network-wide communication takes place, since the Wiki-Learnia users can share data with the associated portals. Learning communities grow across the boundaries of different networks.

Two other practical implementations of this concept can be found in the recommendation system and in the advanced search mechanism. The content-based recommendations also relate to the user context, which includes the self-selected learning objectives and the last read article. The advanced keyword search uses the Wiki-Learnia content and the external repositories e.g. MOOCs, Youtube videos, news or tweeds. Learning institutions such as vocational schools, training institutions and universities provide learning materials on Wiki-Learnia (see Figure 2).

![Figure 2: The concept of the elearning hub 1](image)

The advantage is that the corresponding institutions are able to offer a certification process as well as professional mentoring. A university might provide a feeless course on Wiki-Learnia, which can be further processed and used by the community. If a user wants to obtain a certificate for this course, he has to learn the contents of the certifiable (this can also be a reworked version of the original by the community) version.

A simple certificate with less trust level authentication can be achieved for free. A certificate which is accredited by the institution has to be payed to verify the user identification.

CONCLUSION

MOOCs provide a suitable way for lifelong learning. In addition to this and other advantages, there are also a number of shortcomings and open questions.

One solution for this is the new concept of “e-learning hub”. Wiki-Learnia as a first practical example application is presented. It is wiki software, which allows you to create and edit collaborative learning content.
within the community (crowd-sourcing). It offers various tools of communication such as chat, messaging system and forum. Different types of learning content e.g. MOOC portals, news services, Internet encyclopedias, social networks and various other Web 2.0 platforms can be integrated by using automated methods.

Wiki-Learnia acts as a search engine for e-learning content and can be described as MOOC meta search engine. The participants can expand their knowledge on specific topics. Besides processing the content, authors can use the internal Wiki-Learnia search engine for research.

In future, the (semi-)automatic integration of external content in the Wiki-Learnia modules is possible. For example, appropriate YouTube videos, Wikipedia articles and external links to Google Books can be embedded in a learning module about a specific topic.

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CHALLENGES OF RUNNING A NORTH AMERICAN GRADUATE PROGRAM OFFSHORE

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Abstract

Running a graduate university program offshore is challenging under the best conditions. Obstacles include cost, cross cultural barriers and misunderstandings, travel, country and organizational politics, a changing external environment, currency fluctuations and time-zone differences. There is also the challenge of creating a physical presence for the program and university in the foreign location and developing and protecting the university brand. Universities that run such programs invest heavily in building and maintaining relationships with partner organizations and relevant stakeholders in order to resolve differences and handle uncertainty. In most cases the success of the program is dependent upon the relationship between partners. This research looks at what happens when changes in the partner organization and geopolitical events lead to a disconnect between partners. It also considers the impact of the resultant disconnect on an in-session student cohort, student representatives and the partner organizations.

Key Words: Global, cross-culture, exporting education.

INTRODUCTION

The initial arrangement between the master’s program of the degree granting university and the partnering organization discussed in this paper began in 2001. The degree granting university is a large fully accredited North American institution with a student populous of over 22,000. Quotes included in the paper are from the two student representatives of the last cohort to complete the program and the university director responsible for that cohort. The program was jointly run between the degree-granting university, and the partner organization situated in the host country. Teaching responsibilities and administration of the program were a shared responsibility between the university and the partner organization. Although the partner organization was also a degree granting institution, the only degree being offered by the program was that awarded by the North American University. As part of the program, faculty flew to the host country for one to two weeks at a time and delivered one to two courses during their stay. The partner organization arranged for accommodation, transportation, food and occasional touring opportunities for the faculty members while in the host country. Courses were held roughly once every 3 to 4 weeks.
Despite efforts to improve the program, the faculty experience and the communication between the two organizations, there were regular challenges facing the program directors. For example, over the years admission standards at the university were raised, English proficiency expectations were increased, geopolitical tensions in the area where the classes were held flared up occasionally, program support within the degree granting university was inconsistent, resources were stretched and cultural differences led to miscommunication and misunderstandings. Cultural differences resulted in conflicts between the administration in the two main organizations, the two groups of faculty teaching in the program (the university and the partner organization faculty) and between faculty and students.

From the start of the program until the point the program was suspended in September 2013 the program ran roughly one cohort of students each year. These cohorts numbered from 15 to just over 40 students. Each cohort remained in the program for a year and a half to two years. The majority of the credit courses were taught by the degree granting organization with the student tuition being divided between the two partner organizations in a similar ratio as the course division. The program offered a North American degree in an English learning environment. This was seen as an attractive feature to students entering the program since students were able to obtain a degree from an internationally recognized English-language university without leaving their country. The price of the program was more than similar degrees offered in the host country, but competitive internationally. This permitted students to save on the costs of being an international student and also presented the option of working while pursuing their studies. Additionally, the program opened up opportunities to students for further graduate studies in foreign universities.

In the operation of the program there were six key stakeholders: the degree granting university, faculty from this university, the partner organization, the cohort of students, the embassy of the country of the degree granting university and the Ministry of Education in the host country. Running the program smoothly and successfully depended on overlapping goals among these stakeholders and effective communication between them. The halting of the program in 2013 occurred in large part as a result of changes in these key stakeholders and the communication breakdowns that ensued. As communication broke down between the university and the partner organization, students in the last cohort created new lines of communication with the university in order to remedy the challenges they faced and complete their degree.

This paper starts with an examination of the problems that developed between participants and their effects on the operation of the program. We also look at the impact this had on students and consider the emergent lines of communication that developed to deal with these issues. We conclude with a summary of guidelines that can be used to improve future programs.

**CHANGING ADMINISTRATION AT THE UNIVERSITY**

Faculty and administration turnover in the university and in the partner organization posed challenges for the program. In the case of both stakeholders, one or sometimes two faculty members were assigned to direct the program, facilitate cohorts and maintain communication between the two institutions. Periodically, these individuals were replaced. In July 2010 a new director was assigned to the program in the university. The director had taught in the program during the previous three years and therefore had some familiarity with the program, the culture and the partner organization. This helped to create consistency and continuity within the program. However, in the case of the partner organization, when the director of the program was replaced, many of the support staff also left. Typically the new director was completely new to the organization. This restructuring lead to a time when there was a loss of knowledge about processes. In most cases the transfer from old employees to new ones was done amicably, but not always. This created confusion among faculty and students. Even in an ideal transition, knowledge about process and program history can be lost.

In September of 2010 a new cohort began the program with a three day orientation run by the newly appointed university program director. At that time, there was some tension between the university and the director of the partner organization regarding tuition payment to the university and accommodation of the faculty in the host country. The accommodation issue arose because the director of the partner organization...
had a falling out with the manager of the hotel the faculty previously stayed in. This resulted in relocation to a less desirable hotel. After a year and much discussion, the partner organization started the process of relocating accommodation to apartments in a quieter part of the community. The move to the apartments was delayed as the new apartments required appliances, furnishings and internet services before faculty could move out of the hotel.

POOR RELATIONS BETWEEN THE STUDENTS AND PARTNER ORGANIZATION

As a prerequisite to credit courses at the university, students were required to take preparatory courses arranged by the partner organization. The university required that the partner organization would only allow students who possessed all the required documents to be enrolled in the program. Occasionally exceptions would be made and conditional acceptance could be offered to the student. Unfortunately, the partner organization took a relaxed approach to these requirements, and allowed many students without full documentation to enter the program - expecting students to gather these documents while taking preparatory courses. In some cases students were also allowed to join preparatory courses after they had started. This led to confusion among students regarding when to submit documents and the importance of preparatory courses.

In addition, students were told the program was less than two years in length, but details of when classes would be held and the payment process were left vague. The webpage for the program posted by the partner organization was typically out of date creating additional confusion however since it was not in English it was difficult for the university to monitor.

Student Rep A: According to the website the prep courses should have been maximum 3 month and the rest of the program was supposed to be finished within 15 month so all together 18 month but after seven or eight months we were still just doing all the prep courses. We were also having problems with the payments being made to (the partner organization)...so students were getting a little bit frustrated and asking questions and (those in the partner organization) were all saying you know what we are working with XXX University, there is a problem, management has changed, we are working on that, don’t worry about it. Just do your things, you will finish on time.

Since this student and his cohort were still at the stage of completing preparatory courses, making payments and submitting documents for admission, they were limited to communication with the partner organization. In general, communication between students and the university only began once credit courses commenced. This initial disconnect between the students and the university created miscommunication, which resulted in distrust and uncertainty. In an effort to navigate this confusion, students rallied together and elected representatives to negotiate with the director of the partner organization (Dr. E) on behalf of the cohort.

Student Rep A: ...so we went to (Dr. E), and he started explaining “you guys don’t know what the problems are and what is happening. I am dealing with many problems with the Ministry of Education, with (the university) and with students from previous cohorts. Cohort A are harassing me. One of the students from cohort B wanted to beat me up and all sort of stuff. People don’t appreciate what I am doing. I am doing my best!”...and we were just listening. And we said if they did that sort of thing we don’t agree with that but what our problem is is that everybody is unhappy because you are not communicating with us. We have paid our dues...we are attending the classes...And you haven’t delivered your promises yet. ...So after that meeting we went back to our studying but nothing happened.

Dr. E was frustrated with the university because, based on the previous cohort, he and his staff were doing what was required. The director was not fully aware of the changes initiated by the university and the effects these changes had on the program. These policy changes and changes within the administration at the university meant more was required of the director at the partner organization.
Student Rep A: (Dr. E) was being accused of something which I don’t think was fair...he sort of put himself in the center of problems but all he could do was simply transfer all these problems and unhappiness of the students back and forth between (the university) and the students.

With the replacement of the old university program director and the changes in university policy, students were now required to submit more complete documents before being admitted. As a result, commencement of each cohort slowed down. The partner organization and the university were waiting on each other to finalize student admission. The university was waiting for all required documents. The partner organization, thinking they had done what was required, were waiting for details about the program to share with the students and arrange the support for the credit courses. As a result the credit courses were not commencing.

A: We raised our concerns about when the credit courses would begin and the schedule again with Dr. E. Dr. E responded “you can talk to the program officer in country XXX and get your answers from them. You are more than welcome to communicate with them”. Everybody started doing that explaining the problems saying that “we are speaking to Dr. E and he is saying the problem is from XXX University”. We have already paid our dues and now Dr. E is saying students should submit their documents to XXX University and if they don’t nothing is going to happen. We answered that “as far as we know if some students are missing some documents XXX University can conditionally accept their applications”. XXX University administrator got back to us saying “if you don’t submit the documents the application will not be processed. That is the way we do it in county XXX”.

The students and the partner organization were not adequately informed of the changes to the program structure, timetable, course order, admission procedures and policies. Additionally, since the university changed procedures and policies from those of the previous cohort without fully briefing the partner organization there was unintentional misinformation being supplied by the partner organization. Apart from e-mailing or calling the university directly, there was no stable source for this information that could be used as reference material for the partner organization or students.

Cultural differences also created difficulties. The culture of the country in which the partner organization was located can be characterized by high power distance and low uncertainty avoidance (Hofstede, 2013). In contrast, the culture of the country in which the university is located is low power distance and high uncertainty avoidance. As a result, the director of the partner organization objected to being questioned by students who were younger and less established. The partner organization also expected important information such as a change in program design to be communicated directly to the director at the partner organization – something which did not occur. Instead Dr. E was hearing of the changes through an administrator working for the university. Furthermore, the university was strict in their application of the new policies and procedures they had adopted (high uncertainty avoidance) which conflicted with the partner organization, where the approach was more flexible (low uncertainty avoidance). When the student’s eventually contacted the university directly, they were told unequivocally what the policies were and to expect that their questions, such as what the timetable would be for the courses, would be answered once the information was available. Due to cultural differences the students did not know what to make of this information - wondering if their concerns were once again being ignored. When they consulted with one of the two newly appointed class representatives (required by the university for each cohort) they were told to believe what they were being told by the university.

Student Rep A: I told the students I have been in that country and everything there happens by the book most of the time so if they say so please trust them and listen to what they say be patient and it is going to happen but it is a matter of time. It will happen sooner or later. All we have to do is focus on what we are doing.

As an added difficulty, political unrest in the host country began to present a problem. This added to the wariness of the students in terms of the university’s level of commitment to the program and their cohort.
Student Rep A: Some of the students were getting a little bit excited because of what was happening in (the host country) … The rallying and everything was escalating and we were sensing ... a big conflict inside the country and again inside the country everything was a mess. So everybody was saying what if some revolution or something happens and these people move or something happens to the program. My answer was that we are basically applying with XXX University if anything happens we are XXX’s students and they will take care of that. This is not a problem as soon as we all submit the documents and become the XXX University’s students.

BREAKDOWN IN RELATIONS BETWEEN THE UNIVERSITY AND THE PARTNER ORGANIZATION

In April 2011 the director of the partner organization was suddenly replaced. The new and old director in the partner organization did not view each other in a favourable light, and this led to very little knowledge being transferred between the two. The new director maintained the old staff for one to two months, but ultimately replaced almost all of them. Those who left were not paid outstanding wages and had to go to court to receive money owed. Since the new director and the majority of the replacement staff were low level English users, this further complicated communications between the university and partner organization. These factors combined to make the operation of the program increasingly difficult.

Student Rep B: One of the people who was not so happy when Dr. E left … was me, most of the people they said many not so good words behind (his back), but I was thinking that... the problem was not if he wanted to leave or not, it was a sign that there were lots of problems…I was thinking sometimes a person is not that ...good at one job but at least this job is going to be finished by the same person unless a person who is coming in will be stronger and more skillful in the management. I was not sure if the new person coming (in) can handle all the situations. What we saw was our connection to the partner organization was completely cut. I think Dr. E was trying his best but he thought that he is doing the things in the right way...at least his mind was much clearer than the new people when they came.

Under the new management at the partner organization, requests by the university and students were either ignored completely or poorly attended to. Although conversations between the director of the university and the new director of the partner organization did take place, they were mostly superficial and failed to address outstanding critical issues. New faculty members continued to arrive in the host country, but due to the intense work load, jet lag and the cultural differences in the host country, faculty focused on interacting with students and completing courses to the best of their ability instead of dealing with problems related to the operation of the program. Word of a lack of support by the partner organization was only mentioned occasionally to the director of the university program by faculty members upon returning home.

In addition to the previously mentioned challenges facing faculty members travelling to the host country, accommodations provided by the partner organization also ended up creating issues. Once the new director at the partner organization took over, faculty were moved to the apartment which still lacked adequate appliances, furnishings and internet service. Inadvertently the class representatives found out about the faculty accommodation problems.

Student Rep A: ...we started realizing from Dr. L (XXX University faculty member) that nobody was paying attention to the professors’ needs. We realized that he was not comfortable... he said the mattress is very hard. Dr. L said he asked staff to add one of those sponge pieces on top because “I cannot sleep on that.” We later asked if they [staff of partner organization] bought him what he wanted and he was saying no that is ok, they are busy and when we asked him again he replied not yet but I don’t want to complain just for a small mattress. That is ok! So, he didn’t get what he wanted. It was very annoying. If you cannot sleep properly it means there is a problem and people should pay attention to that.
The partner organization arranged for food to be placed in a fridge at the apartment, but there was no stove to cook on. The only way to boil water was using a glass coffee pot the director had supplied. The staff in the partner organization would take faculty to a restaurant for lunch and dinner but it was always the same restaurant and not always when the faculty wanted to go. A combo washing machine/dryer was included in the apartment, but it was not installed. Under the previous director, each faculty member was given a monetary allowance to purchase food and hire taxis. The new administration terminated this practice. The taxi option was replaced with a driver that had to be prearranged and was not always available or on time. Due to language barriers it was difficult for faculty to order a taxi even if they had the correct currency to pay a driver.

Student Rep A: The professors finish the class and someone (within the partner organization) takes the professor to a restaurant, feeds the professor and then drops them off at the apartment. And then comes and picks them up in the evening to feed them again and then they go back to the apartment and the (staff in the partner organization) were thinking: “Oh! We are just doing a great job!” I was talking with (Student Rep B) saying this doesn’t sound good. These people are getting isolated in here and they have nothing to do and the only good time they have is in the class because they can be with students at least. But then how much time do they need to work on their materials for the next day. More than two hours? And what do they do with the remaining time? We didn’t know that there was no internet (at the apartment). So, we decided to take the professor with us to the places we went to.

FURTHER COMPLICATIONS FOR THE STUDENTS

Following the changes at the partner organization, students were surprised the new director had not visited the class to introduce themselves. Historically, as with the previous director, the students had maintained communication with the director of the partner organization throughout the program. The class representatives decided to take the initiative and introduce themselves to the new director. It was through this undertaking that they realized how disconnected and disinterested the new director was.

Student Rep A: Then we tried to go and meet Dr. F (new director of the partner organization). Just arrange a meeting with him to welcome him. I told (Student Rep B) this is his responsibility, he should be the one coming to our class, and introducing himself. But also what you are suggesting (visiting him) is good. So, how should we do it? (Student Rep B) said ok, I will book an appointment and we will go and meet him. We can also get him something like flowers. I said it is a great idea for sake of the class and the program. She started contacting YYY (the partner organization). Once, twice, three times and she said you know what, I can’t get hold of him. He is not there or is always busy. I don’t know how many times (Student Rep B) called but she wasn’t able to get hold of him. And finally, (Student Rep B) called me and said, you know what Dr. F is saying: “I am busy but I will be travelling to (the community where the classes are held) at 4 o’clock today and if they can come to the airport I can meet with them for about ten or fifteen minutes.”

The student representatives recognized the new director had no interest or intention to meet with them. By avoiding and not return the calls of the class representative the message was clear – you and your cohort and not important to me.

Student Rep A: Is he thinking that we have nothing to do but just meet with him or we will be very honoured to meet with him at the airport? I said, you know what, just forget about them. They don’t even understand what they are talking about. ...He was thinking that he was very superior. I don’t know what goes to people’s mind that they think they are the most important people in the world, or at least in their organization. We are not asking for too much. “We are willing to communicate with you trying to welcome you to this organization and share our point of view with you and you don’t have time for us.” I don’t see any reason for communicating with such people.
Relations between students and the new director and staff at the partner organization remained distant and strained. The staff adopted the attitude of indifference that the director displayed. Problems related to arranging class details and holding/proctoring exams became tense and complicated. In one instance it took over three months before a cable for the projector used by university faculty and students for PowerPoint presentations was repaired. No matter how many times repairs were requested and met with agreement nothing was fixed.

**STUDENT REPRESENTATIVES PERFORM THE ROLE OF PARTNER ORGANIZATION**

Once the student representatives realized that nobody was helping the professors, they took action to rectify the situation. At the same time the director at university XXX was trying to push for change but the distance, time difference and language barrier made the efforts ineffective. The class representatives arranged to meet with a staff member from the partner organization.

Student Rep A: We said Mr. D (staff member of the partner organization) we have a list here. We started by explaining that we are representing our culture. It is very important for the professors coming over here to get good service. It is a credit for you and for the system, for the company, for the country. Please pay attention to this list. He replied, sure, why not. What is it? We explained “The stove is not installed and they cannot cook something for themselves. They cannot even boil some eggs. You have filled the fridge with all these foods for them but they cannot do anything with that. Stove should be installed. Internet, internet is important. They also need an office (in the building with the class). Professors have no privacy….there are empty rooms in there. Just have one of them cleaned up and put a desk and a sign that shows professor’s office.

Gradually the student representatives became the voice for the university and faculty because they spoke the language of the host country and were living and studying in the cities where the partner organization was located. This allowed them to meet staff of the partner organization even if they chose not to answer calls. The university was almost completely cut off from communication with the partner organization. Emails sent to the partner by the university needed to first be translated, so communication was often limited to the most critical issues. Although the university was able to find one person in the partner organization that spoke English proficiently, it was a low ranking employee who, in the host country, did not have enough status to champion for change. As a result, when this person attempted to bring the university’s concerns to the director of the partner organization the concerns were given low priority or totally ignored.

About a month after the new director at the partner organization took over, the students and the university recognized that the partner was no longer an effective stakeholder. At this point the cohort was only halfway through their courses. In an effort to resolve problems and meet the requirements of the program, the student representatives established communication through the internet with the director of the program at the university. Initially it was a social communication but gradually the communications turned into discussions about the challenges the students and the university were confronting. Some of these challenges included the regular issues involved with running this kind of program such as organizing travel to the host country and details about courses and exams. This communication would usually have involved the partner organization with either the students or the university contacting the partner; however, at a certain point, the class representatives recognized the need for them to be more proactive and assume the role of the partner organization.

Student Rep A: That was the point we started asking the professors questions to make sure that everything was ok. At the beginning we were hesitant to ask such questions. It was too much asking, for example, what did you eat for breakfast? Did you have anything to eat? We didn’t want to be in a position to receive a reply of “Why are you asking this question?” But with Dr. P (faculty member from the university) we felt more comfortable asking these questions. He was very friendly. One day I asked him if it is ok if you tell me what did you have for your breakfast. He said yes I had a good breakfast. But I asked him if he could tell me what exactly he had for

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breakfast... I said did you cook some eggs or something? He said no because I don’t have a stove. But I had some milk chocolate. I said are you here standing on your feet for four hours teaching only on a glass of milk chocolate? He said yes, actually I wanted to cook some eggs but I couldn’t. I said you should have used the kettle, he said I didn’t want to damage the kettle. Poor Dr. P used to go two hours before the class (to the building where the classes were held) sometimes to use the internet to just do his works. He was sitting (in the apartment) and getting bored but not complaining. We started taking the professors to the restaurant. We were distributing the cost across the students but again cost wasn’t important. The most important part for us was not to leave them alone.

It was through conversations with the class representatives that the university program director became more aware of the problems faced by the university faculty while working in the host country. During these conversations the director learned that the proctoring of exams, one of the few tasks the partner organization was still entrusted with, was not being managed properly. The person assigned to proctor the exams was arguing with students. The proctor did not read English, so when the exams arrived by email, the attached instructions were not always followed correctly. Students even reported that the proctor would sometimes leave students unattended during exams. If there were any problems with the exam, the proctor would claim that the university had made the mistake and that students should complain to the director of the partner organization so he would know that the university was not fulfilling their obligations.

The partner’s building facilities also caused a problem. When the director of the partner organization was replaced, the new director had the location of the main office changed. In the new set-up the room designated for holding exams was too small so students sat too close to each. This created the opportunity for students to see each other’s work. Based on this revelation, the director of the university program instructed faculty to use open-book exams to prevent some of the problems caused by students sitting so close.

Student Rep B: ...the interesting part was that (Student Rep A) was trying to be in contact with University XXX to moderate the issues. Sometimes the pressure was so high... We wanted to send good news to University XXX and help them to be encouraged to support us.

With the director of the university program and student representatives in communication, many problems were resolved; however, these stakeholders needed to largely ignore the partner organization and problem solve amongst themselves in order to keep the program operating. The most demanding issue the director of the university program and the students navigated was putting pressure on the partner organization to submit the last payment of student tuition to the university. The partner organization held onto the last payment for over 12 months - ignoring every request by the university to make the required deposit. In the end, the class representatives worked with the students and the director of the university program to put the necessary pressure on the partner to pay the money owed. When the payment was received the relationship with the partner organization was ended.

Director of the University Program: I was very fortunate to work with two such accomplished and effective students as class representatives. If it had not been for them the whole situation would have been on my shoulders and likely next to impossible. I needed the ears and eyes on the ground to be informed. The two class representatives were better than the partner organization in providing meaningful dialogue and generating ideas to solve problems. I normally would not want to put such pressure and demands on class representatives but we had no choice. We were all in the same boat so we knew we had to work together. We also concluded we were not going to let the partner organization destroy the program and the cohort so we had a very powerful goal and vision (that of completing the program for the cohort) to give us the energy to do what needed to be done.
RECOMMENDATIONS

The program and the partnership operated smoothly for almost nine years before the leadership problems arose. The effective operation of the program up until this point created some complacency in the university administration. Essentially the belief was that the culture and limitations of the host country (due to infrastructure problems) meant that operations sometimes did not go as planned, but things would always work out. In retrospect it was not inconceivable that an unqualified and unhelpful director might take the helm of the partner organization at some point. Although this event may not have been easily predicted, there are plans that could have been set beforehand that would have better protected the university. As such there are a number of recommendations that arise from this program that can be used to help make other offshore graduate programs run more smoothly:

1. All policies and procedures related to the program should be documented and easily accessible by all stakeholders. Also, given that leadership changes can result on both sides of the partnership, it is essential that all participants can turn to a common, up-to-date source when dealing with program procedures. The contract between partners should explain responsibilities of the partners and provide a program history. It should serve as an explanation of how the program is run, responsibilities, costs, expectations and provide a history of significant events in the program so the knowledge is not lost. Policies and procedures should be part of the contract between partner organizations. This way all participants have added motivation to follow the policies and procedures.

2. Provide a list of expectations and responsibilities for students. Some of the problems both directors faced were related to managing student behaviours. Students from earlier cohorts were able to bend the rules and threaten the director of the partner organization if they did not get their way. This created problems for the partner organization and subsequent cohorts. This is especially challenging when running a program overseas as students in the host country may not feel the partner organization is the true representative of the program.

3. Have students pay their tuition directly to the degree granting university. The partner organization was responsible for offering the preparatory courses, gathering application documents and student tuition. This was agreed to in order to enhance the authority of the partner organization over the students. Unfortunately, this arrangement places the university at risk in terms of receiving tuition payments.

4. Establish communication between the director of the university program and the students. This can be facilitated by electing class representatives for each cohort. Communication with the students can be invaluable in resolving problems and understanding what is happening in the program. It also provides a line of communication in the event there are problems with the program or partner organization.

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REFERENCES

THE ADVENTURE OF OUR BOOK: PROJECT OF PRINTING THEIR STORIES IN PRINTERY WRITTEN BY 48-54 MONTHS AGE CHILDREN’S OWN

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Abstract
Every child does paintings, every child likes storytelling, likes stories. However, every child gets familiar with books from its’ babyhood, and it should do. This book is the first step of reading habit. The purpose of this study is; by living the process of their own book from script to printing press and production, making the children realize that their imagination can be perennial by scripture and pictures. The samples are 12 children between 48-54 months age. To identify the effectiveness of our Project study, a 10 question qualitative survey-prepared by analysts- was performed before the Project. The duration of the Project study was 8 weeks. At the end of the study the test was repeated to identify the effectiveness and after six months it’s repeated once more to identify permanency. The interview technique has been used to collect the data in this study.

Key Words: Preschool education, story writing, printery.

INTRODUCTION
Every child paints, every child tells stories, and every child likes listening to stories. Also, every child is interested in books since the cradle, and they should be. Picture books are the main materials that impress the love of books on children and they constitute the first literary and aesthetics foundation of a child (Gönen, 2000). With the help of books, children also discover that the spoken language can be transferred into writing, as in through the human history.
After the discovery of printing, books have become more accessible and today, they have a essential place in our daily lives. If the habit of reading books reflects the level of development of a country, then it must be acquired at young ages so as to maintain it during the adulthood. It can be seen when the work “Turkey’s Reading Habit Report” prepared recently by the Children’s Foundation is examined that the most productive three periods for acquiring the habit of reading are childhood, adolescence and adulthood, and the most effective three institutions are family, school and social circle (Turgut Bayram, 2009).

The first individuals that children make contact are the members of family. Naturally, they meet the books through the family. In their research, Hezel et. al. (2000) note that when family members take children on their naps, look at and read the books with them, they support all developmental aspects of children, especially the cognitive development. Furthermore, when parents listen to the stories told by children by using their imagination, write such stories down and then read them back to children, they motivate and promote the creativity of children. If the child feels that he or she is cared and his or her story is appreciated and liked, then that child may respect and like other books. After a parent writes down a story told by the child, he may ask the child to draw paintings depicting that story or find pictures in old magazines or newspapers and cut them. Furthermore, this can be a patchwork; some of them the pictures found by the child, and others are the paintings. After arranging the pictures and put in order, a book of that story is created with the child. Parent puts down the story on paper, while the child draws pictures and pastes them. In this way, the child uses fine motor muscles, develops the ability of using scissors and pencil correctly, understands the value of work-sharing and sharing, and even empathizes with writers and drawers (Larrick, 1958).

The most important second person after the parents to establish and maintain the child’s relationship with books is pre-school teachers. The foundation of reading habit that the children will gain after starting the school has in direct proportion to the positive child-book relationship established during the pre-school periods (Sever, 2003). In general, the children who learn reading before starting the school have experience of reading or listening to stories. Furthermore, the child’s relationship established during the pre-school times helps children quickly learn reading and writing in primary schools. Until that age, the writings are a kind of picture (for example black spots etc.) to them, and they suppose that the parents read the story from those pictures. However, after that age, children realize that they are not actually pictures but writings. As a result, they show interest in writing. To them, writing is equal to reading, and thus they start to think that they need to learn writing to be able to read (Çakmakçı, 2011). For this reason, it is very important for children to take part in book-related activities during the pre-school period. Besides, combining a written story with pictures and turning it into a book is an adventure in itself...

In the light of foregoing information, the purpose of this work to ensure that children experience the process from designing the book of their own story to print and reproduce it by using the printing and realize that they can make their thoughts permanent through writing and pictures.

METHODOLOGY AND DATA COLLECTION

This study which is an action research, one of the qualitative research techniques, was carried out on 48-54-month old 12 pre-school children attending Pre-school Application Unit, Istanbul Marmara University in the spring term of 2012-2013 education term.

Action research is a method to define a problem, to do something to solve the problem, to see to what extent the attempts succeed, if the outcome is not satisfactory, to rety, in brief; it is to experience as part of real life (Aksoy, 2003:477). According to Wats, action research is a method in which participants carefully revise their educational applications systematically using the research techniques (Ferrance, 2000:7).

Action research is a research technique which is carried out under the supervision of the researchers with the participation of those implementing the research and those experiencing the problem, which is based on making a critical evaluation of the implementation and then coming up with suggestions necessary to take precautions to help matters (Karasar, 1999:27).
The stages of a qualitative research can be suggested as follows; defining the problem to be handled with, determining the participants, data collection, data analysis, discussion and findings. Considering the stages above, a study is planned, which will support the works to ensure that pre-school children experience the process of printing and reproduction of books and realize that spoken language can be made permanent through writing and pictures, and some activities are organized to raise the awareness of children towards books by examining their development process. Based on the literature review at national and international level and interviews with the experts in this field. The project is scheduled as 8 weeks. The content of the project is as follows:

**Content Of The Project**

**Week 1**
Books are examined with children. Similarities and differences are discussed. The writers and drawers of books are shared through the question and answer method.

**Week 2**
A story is written with children.

**Week 3**
A page in the book is examined. After tearing newspapers, they got wet with water.

**Week 4**
After 1 week, the wet pages are wringed and left for drying. Then the pages are prepared.

**Week 5**
Printing workshop is visited. Children watch a cartoon about the creation of pages.

**Week 6**
The story written previously is drawn on pages.

**Week 7**
A book cover is prepared

**Week 8**
Printing house is visited. The book prepared by children is transferred into digital environment. Then the printing is watched with children.

The selected sample group was pre-interviewed through the unstructured evaluation form developed by researchers. The interviews were tape recorded. The project was applied on children for 8 weeks. At the end of project implementation period, the same evaluation form is applied on the selected sample group. In this way, it is attempted to determine whether the activities for ensuring that pre-school children experience the process of printing and reproduction of books and realize that spoken language can be made permanent through writing and pictures result in lasting consequences in children. The interviews were conducted in a silent and peaceful setting and they were tape recorded. At the planning and implementation stage of the study, two preschool education experts, one printing education expert and one pre-school teacher were included.

**Questions of Evaluation Form for Ensuring that Pre-school Children Experience the Process of Printing and Reproduction of Books and Realize that Spoken Language can be Made Permanent through Writing and Pictures:**

1. Do you have books at home?
2. Who do you think write these books?
3. Do your books have pictures?
4. Who do you think paint these pictures?
5. What is the function of books for you?
6. What is the name of your favorite book?
7. Who is your favorite fictional character?
8. How do you think the books are made?
9. Have you ever seen a printing house?
10. What do you think a printing house do?
11. What would be the theme of your book?
12. What would be the name of your book?
13. Would you draw the cover of your book?

**FINDINGS AND DISCUSSION**

The following table shows the answers for the questions of evaluation form for ensuring that pre-school children, the sample group of the study, experience the process of printing and reproduction of books and realize that spoken language can be made permanent through writing and pictures result in lasting consequences in children.

Table 1: Results of the Pre-Evaluation Form for Ensuring that Pre-School Children Experience the Process of Printing and Reproduction of Books and Realize that Spoken Language Can be Made Permanent Through Writing and Pictures:

<table>
<thead>
<tr>
<th>Sample Group</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
<th>C7</th>
<th>C8</th>
<th>C9</th>
<th>C10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.1</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Q.2</td>
<td>I don't know</td>
<td>I don't know</td>
<td>My mother</td>
<td>Teachers</td>
<td>My father</td>
<td>I don't know</td>
<td>I don't know</td>
<td>Shopkeeper</td>
<td>I don't know</td>
<td>I don't know</td>
</tr>
<tr>
<td>Q.3</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Q.4</td>
<td>I don't know</td>
<td>I don't know</td>
<td>Me</td>
<td>Children</td>
<td>My father and mother</td>
<td>I don't know</td>
<td>No</td>
<td>Painters</td>
<td>I don't know</td>
<td>I don't know</td>
</tr>
<tr>
<td>Q.5</td>
<td>Looking</td>
<td>Reading</td>
<td>I don't know</td>
<td>I don't know</td>
<td>Playing</td>
<td>I don't know</td>
<td>I don't know</td>
<td>Reading</td>
<td>I don't know</td>
<td>Looking</td>
</tr>
<tr>
<td>Q.6</td>
<td>Snow White</td>
<td>Animals</td>
<td>Car</td>
<td>Ben 10</td>
<td>Car book</td>
<td>Snow White</td>
<td>Mickey Mouse</td>
<td>Barbie Doll</td>
<td>My Mother</td>
<td>Snow White</td>
</tr>
<tr>
<td>Q.7</td>
<td>Spiderman</td>
<td>Princess</td>
<td>Flying heroes</td>
<td>Superman</td>
<td>Gift for us</td>
<td>Snow white</td>
<td>Mickey</td>
<td>Strawberry</td>
<td>Princess</td>
<td>Spiderman</td>
</tr>
<tr>
<td>Q.8</td>
<td>I don't know</td>
<td>I don't know</td>
<td>By reading</td>
<td>Putting in bag</td>
<td>I don't know</td>
<td>By painting</td>
<td>I don't know</td>
<td>Shopkeeper</td>
<td>I don't know</td>
<td>I don't know</td>
</tr>
<tr>
<td>Q.9</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Q.10</td>
<td>I don't know</td>
<td>I don't know</td>
<td>I don't know</td>
<td>Repairs</td>
<td>I don't know</td>
<td>I don't know</td>
<td>I don't know</td>
<td>As book</td>
<td>I don't know</td>
<td>I don't know</td>
</tr>
<tr>
<td>Q.11</td>
<td>Photocopy</td>
<td>I don't know</td>
<td>By reading</td>
<td>I don't know</td>
<td>I don't know</td>
<td>I don't know</td>
<td>Tearing</td>
<td>I don't know</td>
<td>I don't know</td>
<td>Photocopy</td>
</tr>
<tr>
<td>Q.12</td>
<td>Spiderman</td>
<td>Ali Father</td>
<td>Fat Car</td>
<td>Ben 10</td>
<td>watch</td>
<td>Lightning mcqueen</td>
<td>Sea</td>
<td>Ladder train</td>
<td>Barbie doll</td>
<td>Toy seller</td>
</tr>
</tbody>
</table>
The results of pre-interview and interview are shown in Table 1 and Table 2, respectively. In examining the tables, it can be suggested that the activities for ensuring that pre-school children experience the process of printing and reproduction of books and realize that spoken language can be made permanent through writing and pictures have created an important difference in children. While the sample group was not able to establish a connection among defining the theme of a book, picturing, printing and reproducing the book, it was observed during the final interviews conducted after the implementation of project that the children were able to establish such connections and have a command of definitions. It also attracts notice that they defined and noted the processes relating to writing, printing and reproduction of books.

**CONCLUSION AND DISCUSSION**

It can be concluded that the project applied for ensuring that pre-school children experience the process of printing and reproduction of books and realize that spoken language can be made permanent through writing and pictures has been useful.

As a result of literature reviews at national and international level, it was identified that there is a shortage in this subject and researchers should focus on it. The following recommendations are offered based on the literature review and results of implementation.

- As Ezzel, Laurick and Turgut noted in their works, such activities to be performed both by parents with their children and by pre-school education institutions make positive contributions to children adopting positive attitudes towards reading and writing and acquiring the habit of reading and maintaining such in the future. For this reason, families should be informed of this issue and pre-school education institutions should include similar activities in their curriculum.
The generalizability of foregoing results can be increasing by implementing this Project on various age groups. In the future, a longitudinal study should be conducted to examine whether this study has made any influence on the reading habit of children. One or more children’s libraries must be established in every city, even in schools, so as to ensure that children have more contact with the books. When parents read books for their children, they should examine all the details with them (writer, drawer, cover, title, theme, pictures, writings, direction of writings, page numbers etc.), not just read. If appropriate, the book should be created again with the child. When reading the book, parents should ask children questions. While reading, the parent should stop at intervals and ask “What do you think comes after this? How would you end this book if you were the writer?” After child’s answer, the parent should say, “Let’s see how the writer ends this book”, and allow the child to make comparisons. It must be ensured that children write stories at home or pre-school education institutions on a subject they prefer, and realize that spoken language can become permanent through writings and pictures, by way of activities such as putting pictures on the book and preparing a book.

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REFERENCES


ANALYSIS OF THE SCIENCE AND TECHNOLOGY PRESERVICE TEACHERS' OPINIONS ON TEACHING EVOLUTION AND THEORY OF EVOLUTION

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Abstract
In this study, we investigate of science and technology teachers' opinions about the theory of evolution and the evolution teaching. The aim of this study, we investigate of science and technology teachers' opinions about the theory of evolution and the evolution teaching. This study is a descriptive study. Open-ended questions were used to determine the views of pre-service teachers. Questions used in the statistical analysis of data for obtained student’s through. Solution to the problems encountered in practice as a method for the production of research so descriptive research approaches used in the survey method. This study was applied Department of Science Teaching at the Faculty of Education students in the last class. Department of Science Teaching 90 students participated the study in Bayburt University. The 90 students in the sample and all of the mare 46 female and 44 male. The findings of the study about students opinion for evolution that coming from a common ancestor and such as Darwinian theory. In addition students will not be denied the fact that the evolution of science but from the point of view of society reported a negative effect on the teaching of evolution

Key Words: The theory of evolution, evolution education, Science and Technology preservice Teacher.

INTRODUCTION

Human beings by nature have been curious about phenomenon in their environment and this sense of curiosity has caused the human beings to analyse this phenomenon. Human beings particularly known for their interest in living beings have observed them in their environment since the ancient times and they have tried to make deductions. Scientific disciplines intended for the observation of living beings have emerged in this process which started with the observations of living things by human beings in their environments and has continued up till now.

One of the aims to examine the living beings is to reveal the similarities and differences between the living things. This purpose is one of the fundamental functions of biology discipline. Evolution theory is one of the comprehensive theories which explain the similarities and differences of living beings in cause and effect
Evolution as a process has always gone on in the history of the earth and it became famous with Charles Darwin. Darwin defined evolution simply as “the change process of living and non-living beings.” (Akyol, Sungur & Tekkaya, 2010). The concept of evolution is also not constant and it changes in the light of new scientific studies in time. This variation has given an opportunity to evolution to make contributions to science. Evolution has made two important contributions to science. One of them is to accumulate series of evidence which promotes organic evolution idea and present it to the science world by organizing it. The second one is to reveal the principles of "Natural Selection" which form the basis of evolution theory (Kılıç & Tekkaya, 2011). It is thought that although evolution is supported in scientific environment, it has been mostly a controversial topic in the society (Beardsley, 2004; Bishop & Anderson, 1990; Köse, 2010; Wiles, 2010). While Darwin was introducing and defending the principles, he did not take into account an important factor which is social dimensions. There are some criticisms expressed within the context of two hypotheses introduced by evolution. One of the criticisms is that evolution theory is an idea with a purpose of generalization (Çetinkaya, 2006; Kılıç, Soran & Graf, 2011) because evolution theory inks adaptation of living beings to environment and their survival. It also explains the survival of living beings with their adaptation to the environment which also makes a very important contribution to our knowledge (Demir, 2009). According to the second criticism, when this theory is particularly applied to social relations or development of civilizations, it protects the strong who eliminates the weak, and tries to legitimate them (Alles, 2001). Still another criticism at this point is whether this theory suits to our present knowledge or not. If this theory suits to our present knowledge, to what extent it suits (Kılıç, Soran & Graf, 2011). There are adverse opinions about this subject. There are opponents who support the approach that the weak who cannot compete in nature disappears. On the other hand, there are those who argue that there are observations and examples which reveal that living things protect each other according to cooperation (Akyol, Sungur, Tekkaya, 2010; Demir, 2009). These views were not only limited to the following discussion fields but also they had effects on the condition and learning process of evolution theory, an important subject in biology, in teaching environments.

There are studies conducted about teaching evolution to reveal the lack of student knowledge about evolution theory (Asghar, Wiles & Alters, 2007; Deniz, Donelly & Yılmaz, 2008; Kılıç, Soran & Graf, 2011; Kim & Nehm, 2010; Köse, 2010; Smith, 2010). Literature suggests that the problems students have about their attitudes and perceptions towards evolution, learning and their acceptance of evolution as an important theory in biology have not completely been eliminated yet (Bishop & Anderson, 1990; Green, 1990; Settlage, 1994; Sinclair, Pendarvis & Baldwin, 1997). The results of the research conducted about the acceptance of evolution theory reveal that there is a negative relationship between the religious belief levels and positive attitudes developed towards evolution theory (Crawford et al., 2005; Sinatra et al., 2003). The main reason for this negative relationship may have resulted from different explanations of “origins of human beings” by evolution theory and belief systems (Apaydın & Sürmeli, 2009). Prejudice in the society towards evolution theory occurs as the subject is associated with religious beliefs and it is brought to agenda. This condition manifests itself in schools and the school administration and families reflect their views about evolution on the instruction in classrooms (Çetinkaya, 2006).

While teachers were giving their reasons for not preferring to teach evolution theory in literature, they gave justifications such as lack of content knowledge to teach evolution, anxiety about not being able to answer the questions of curious students, lack of guidance and support from education programs and lack of interest in the subject (Apaydın & Sürmeli, 2009; Kılıç, Soran & Graf, 2011). In this study the views of pre-service science and technology teachers about evolution theory and teaching evolution will be examined.
METHOD

The study carried out to reveal the pre-service science and technology teachers’ views about evolution theory and teaching evolution is a descriptive research. Open-ended questions were used to determine the pre-service teachers’ views. Statistical analyses of the data obtained with the questions were used. Therefore, survey method, one of descriptive research methods, was chosen in order to investigate the problems encountered during implementation and generate solutions. Survey method is survey arrangements carried out on the entire population or a group or sample drawn from a population to pass general judgment in a population composed of many elements (Yıldırım & Şimşek, 2004). Generalizations are tried to be obtained over statistical analysis of the data obtained via questions. After a big picture of the situation is drawn, case studies are started by taking a very special section out of the big picture (Çepni, 2012).

Sampling of the Research
The research was carried out with the students in the 4th year of their studies in Science Teaching Department of Bayburt Education Faculty in Bayburt University. 90 students studying in Science Teaching Department in Bayburt University participated in the study. 46 of the participants were females and 44 of them were males.

Data Collection Tools
Five open-ended questions designed to reveal the pre-service science and technology teachers’ views about evolution theory and the teaching of evolution were used as data collection tools. In addition to this, observations carried out by the research during the administration were used. The open-ended questions which were going to be asked to the students were evaluated by asking expert opinions with regard to content, language, clarity and intelligibility. Necessary changes were made and the questions were finalized in line with expert opinions.

Data Analysis
The data obtained through interviews carried out with pre-service science and technology teachers were analyzed by content analysis method. In content analysis the data which are similar to each other are gathered within the framework of specific concepts and themes and then they are organized and interpreted clearly (Yıldırım & Şimşek, 2004). The data were classified and evaluated in line with this method. The data obtained from the answers given to the questions by the pre-service teachers were analysed and they were independently sorted out and grouped. Then these categories were compared with each other and finalized. The data were analysed and their frequencies (f) and percentages (%) were given. The responses of the pre-service teachers were also quoted.

In addition to this, while the research questions were designed, the researcher benefited from the studies conducted by Apaydın & Sürmeli (2009), Akyol, Sungur & Tekkaya (2010), Kılıç & Tekkaya (2011). The reliability of the questions used in the study was thought to be provided. Moreover, the reliability of the questions was provided by benefiting from expert opinions and the literature. The flow chart of this study was given in Diagram 1. Moreover, the findings obtained from the analysis were presented in detail in the next section of the study.
FINDINGS

The findings obtained as a result of analysis results of the responses given to the five open-ended questions designed to determine the views of pre-service science and technology teachers about evolution theory and teaching of evolution were presented below.

Students' views about evolution concept

Students were asked the following question: “What is the first thing that comes to your mind when you’ve heard evolution?” This question aimed at presenting what students understood from evolution mainly. The subjects which the students particularly emphasized were grouped and presented in Table 1.

Table 1: Students’ views about evolution concept

<table>
<thead>
<tr>
<th>Student Views</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>People evolved from apes</td>
<td>35</td>
<td>39</td>
</tr>
<tr>
<td>Darwin and Darwin’s theory</td>
<td>22</td>
<td>25</td>
</tr>
<tr>
<td>Ideas which do not accord with a belief</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Transformation of species into other species in time</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td>Extinction of dinosaurs</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Ideas which do not accord with reason</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
When the responses are analysed, the first idea that comes to students’ mind when they have heard evolution is that “people evolved from apes.” (% 39). The following statement of a university student can be given as an example: “When I first heard evolution, I think the first question that came to my mind was how we evolved from apes.” Moreover, it was determined that a considerable majority of pre-service teachers (% 25) identified evolution with Darwin. For example, one of the university students said, “To me evolution means Darwin and his theory.” Moreover, students evaluate evolution from the viewpoint of the phenomenon presented by this theory which says “transformation of species into other species in time.” (% 22). The following statement by one of the university students explains this situation: “The idea which suggests that how origin of species derived from each other comes to my mind. Moreover, what comes to my mind is how one species descended from the other species or how a living being is formed.”

**Students’ positive or negative views about evolution**

Students were asked the following question: “In your opinion what are the positive or negative sides of evolution? Explain it with your reasons.” This question aimed at revealing the general views of the students about evolution and underlying reasons for these views. The subjects which the students particularly emphasized were grouped and presented in Table 2.

<table>
<thead>
<tr>
<th>Student Views</th>
<th>Reasons</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSITIVE</td>
<td>Examination of development phases of living things</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Urge people to think</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Giving information about the recognized and unrecognized living beings</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>NEGATIVE</td>
<td>Descend from common ancestor</td>
<td>40</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Natural selection</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Unproven</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

When the positive or negative views of the pre-service teachers about evolution were analysed, it was revealed that more than half of the pre-service teachers had negative views. It was revealed that a majority of the students (% 44) who expressed negative views did not agree with the idea which said that living beings descended from common ancestor and they regarded the idea as negative. A university student stated, “The idea which says that human beings and some animals descended from common ancestor sounds crazy.” A considerable majority of university students (% 22) who had positive views stated that evolution was beneficial when the development phases of living beings were examined and it made contributions to science. For example, a university student said, “To me, the most important contribution of evolution is that it explains which living beings emerged when and it processed the development phases of living beings. Moreover, a considerable majority of students (% 16) stated that evolution gave information about the living beings that were recognized and unrecognized today. A statement of a university student which represented this situation can be given as an example: Evolution enabled us to have information about all the recognized and unrecognized living beings.”

**Students’ views about scientific aspects of evolution**

Students were asked the following question: “Does evolution have a scientific aspect? Explain it with your reasons.” This question aimed at revealing the students’ views about scientific aspects of evolution and the probable causes of their views. The subjects which the students particularly emphasized were grouped and presented in Table 3.
Table 3: Students’ views about scientific aspects of evolution

<table>
<thead>
<tr>
<th>Student Views</th>
<th>Reasons</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific</td>
<td>Investigation of development of natural events and living things</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Giving opportunities to generate new ideas and views</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Based on concrete data</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Based on experiments and observations</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Presenting evidence</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Being a theory</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Unscientific</td>
<td>Based on an individual idea and a hypothesis</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Contradicting with religious beliefs</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Lack of conclusive evidence</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Including invalid information</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Based on the question asked to the students about evolution, the students were asked to question the scientific aspects of evolution. More than half of the students stated that evolution had scientific aspects (% 59). Majority of the students who expressed that evolution had scientific aspects argued that evolution investigated development of natural events and living beings, gave opportunities to generate new ideas and views and presented evidence within its framework. In order to exemplify each situation, the following statements by university students can be given: “Evolution has a scientific aspect. With the help of scientific investigation it would not be known what the next living beings looked like before or we would not know where the extinct species lived or what they looked like from their fossils.”, “Of course evolution has a scientific aspect because evolution emerged based on the results obtained from fossil evidence.”, “I think that everybody should know their views about evolution and consider them. Besides, a person who investigates and thinks can find what is logical and synthesize them.” %41 of the students stated that evolution did not have scientific aspects. While some of the student who explained why it was unscientific argued that evolution was based on individual ideas and hypothesis (% 12), some of them argued that evolution did not have concrete evidence (% 13). The following statement of university students can be given as examples: “I don’t believe that evolution has a scientific aspect when I consider the periods in evolution because they opine and make explanations based on assumptions. For example, how do these people know what happens when a shooting start hits the Earth?”, “If evolution were scientific, there would be definite and clear answers. It must be proved as the sun rises in the east. This theory had already been refuted by today’s scientists.”

Students’ views about the concerns about teaching evolution

Students were asked the following question: “Do you feel concerned about teaching evolution? Explain it with your reasons.” This question aimed at revealing whether students were concerned about teaching evolution or not and the probable causes of their views. The subjects which the students particularly emphasized were grouped and presented in Table 4.

Table 4: Students’ views about the concerns about teaching evolution

<table>
<thead>
<tr>
<th>Student Views</th>
<th>Reasons</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am concerned</td>
<td>Evolution involving many complicated phases</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Lead off the students with weak religious beliefs</td>
<td>27</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Students’ consideration that teachers may adopt this view</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>It is difficult for teachers to teach a concept/phenomenon which the teacher does not seem to accept as logical or adopt.</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Base on probabilities and lack of concrete data</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>If the complicated phases are explained meaningfully and gradually, there will not be concern..</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Evolution encourages students to think and arouse curiosity and lead them to study</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>
Because it is a theory, evolution is science and must be taught like the other sciences. Explain the wrong sides of the theory to the students. The lesson should be taught in order to eliminate the prejudices. No questions about this topic is not asked in the tests administered by the institutions.

When the percentages of the students who responded to the question which asked to determine whether they felt concerned about teaching evolution or not was examined, it was discovered that more than half of the students felt concerned about teaching evolution (% 55). When the students’ reasons for feeling concerned were examined, it was revealed that evolution had aspects which contradicted with religious beliefs and therefore it was believed that teaching evolution would have negative effects on the students with weakness of faith (% 31). The following statement of a university student can be given as an example: “If we compare evolution with our religion, primary students may not be able to realize the differences between evolution and religion and it may cause them to diverge to different things. That’s why I am concerned.” The findings obtained reveal that % 45 of the students do not have concerns about teaching evolution. When student responses which do not have concern were examined, a considerable majority of students (% 25) stated that evolution must be described as science and evolution must be taught. For example, a university student stated, “Evolution is a branch of science. Science also means sense of curiosity, questioning, and adding new information to already existing knowledge. Acquiring new information and transferring the newly acquired information to others correctly do not concern me.

**Students’ views about importance of teaching evolution**

Students were asked the following question: “Is teaching of evolution important? Explain it with your reasons.” This question aimed at revealing the students’ views about importance of teaching evolution and the probable causes of their views. The subjects which the students particularly emphasized were grouped and presented in Table 5.

<table>
<thead>
<tr>
<th>Student Views</th>
<th>Reasons</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NECESSARY</strong></td>
<td>Having vast accumulation of knowledge and being scientific</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Investigating fossils</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Important due to general knowledge</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Having knowledge about extinct animals</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Urge people to think</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Knowing about the developmental stages of nature and living beings from past to present</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td><strong>UNNECESSARY</strong></td>
<td>Based on assumptions and interpretations</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Not scientific</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Having reservations in terms of religion</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Involving many different views</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

When the students’ views about the importance of teaching evolution were examined, it was revealed that a great majority of the students stated that teaching evolution was necessary (% 69). Most of the students (% 24) who stated that teaching evolution was necessary argued that evolution had rich accumulation of knowledge and it was scientific. The following view of a university student represents the situation: “People should have information about evolution which has still been debated and has a scientific aspect. People can object to evolution which indicates that evolution has a scientific background. Moreover, taking evolution education does not mean to accept evolution. In addition to this, when the student responses who stated that teaching of evolution was unnecessary were examined, the students argued that it was mostly inconvenient in terms of religion (% 12) and evolution was based on only assumptions and interpretations (% 11). The following
statements of the university students can be given to exemplify these two conditions: “To me, it is very important and necessary because most of the things explained are only assumptions and the interpretations of the people and because you cannot know whether it belongs to the man’s or living being’s skull by examining the fossil evidence. You can not claim that it is the ancestor of a former living being”, “I think teaching of evolution is wrong especially at primary education in terms of religion as it says “man evolved from apes”.

**DISCUSSION AND RESULTS**

When the findings were examined, it was revealed that a great majority of the students attributed meanings such as Darwin’s theory and descending from common ancestor. It was thought that this situation arose from the fact that evolution was only taught as a separate unit in the last grade of secondary education and therefore the subject of evolution made it difficult to establish a connection with the subject matters of biology course. It was determined that a considerable majority of students stated negative views about evolution due to the dominant idea which said that human beings descended from common ancestor. Similar situations were revealed in the study conducted by Akyol, Sungur & Tekkaya (2010).

It was thought that why the pre-service teachers disapproved of teaching the subject was that they were concerned that the people who told the subject would be branded by the society. Moreover, pre-service teachers stated that students would react to the subject due to their religious beliefs and value judgments and also the subject would cause confusion in primary students’ minds. Another point which was frequently mentioned by the pre-service teachers was that society in general looks most often to the subject with prejudice. This prejudice suggests that the negative views observed with the pre-service teachers about teaching evolution might have resulted from the society’s view points. There are also similar situations in literature (Akyol et al., 2010; Graf et al., 2011; Kılıç & Tekkaya, 2011).

Some students who stated the importance of teaching evolution drew the attention on the fact that evolution is a science and it cannot be denied. When they indicated that the wrong aspects of this theory should be revealed and taught to students, it was thought that they acted upon the refutability quality of scientific knowledge while evaluating evolution (Popper (1979). In addition to this, it can be implied that a considerable majority of the pre-service teachers thought that evolution has a scientific aspect which led the great majority of teachers to state that teaching evolution is essential. The view which pre-service teachers who stated that evolution did not have a scientific aspect relied on the basis that evolution was completely proved. It can be stated that formation of such a way of thinking with the pre-service teachers arises because pre-service teachers see scientific knowledge substantially as a common property of a society or as nothing (Kuhn, 1970).

The results obtained from the study reveal that the scientific and pedagogical knowledge of pre-service teachers is important to deal with the difficulties students have in understanding evolution and the concepts of scientific theory. The research has made important contributions to the institutions which train teachers. It is also considered that the findings obtained will make contributions to the development of the programs, such as in-service training, courses, seminars, which will promote the professional development of teachers. This study is limited to pre-service science and technology teachers. It is suggested that more teachers and pre-service teachers should be included in the sampling of the study.

**WJEIS’s Note:** This study is presented as an oral presentation on V. International Congress of Educational Research.

**REFERENCES**


A RESEARCH ON GEOMETRY PROBLEM SOLVING STRATEGIES USED BY ELEMENTARY MATHEMATICS TEACHER CANDIDATES

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Abstract
Geometry is one of the most important branches of mathematics education, because the aim of the geometry teaching is to provide students with the ability of critical thinking, problem solving and a better understanding of the other subjects in mathematics by making the students have a high level of geometric thinking skills (Şahin, O., 2008). Research of problem solving, which is located in the centre of education, in this extremely important branch of mathematics education is quite important for mathematics education in our country as in many countries. There is a lot of research on this issue in the literature. Elçin Emre (2008), has searched secondary school students’ abilities of using problem solving strategies in her master’s thesis and reached the conclusion that students are quite willing to use a strategy they have learned. Elçin Emre has also observed that students can use the strategies they have learned appropriately in their homework after the strategy teaching. On another research, İsrael (2003) has examined problem solving strategies used by 8th grade students in terms of level of success, gender, and socio-economic level variables and reached the conclusion that there is a significant relation between problem solving strategies and the level of success, socio-economic level and gender.

This study investigated elementary mathematics teacher candidates’ problem solving strategies in geometry classes. The study was carried out with the participation of 20 students attending Buca Faculty of Education Elementary Mathematics Education program in 2012-2013 spring semester. In this study, semi-structured interview was used among qualitative research methods. In order to determine teacher candidates’ problem-solving strategies, semi-structured interview form and “the form of determining geometry problem solving strategies” consisting of open-ended questions were developed as a means of data collection.

In the part of the research findings, there is data including problem solving strategies used by mathematics teacher candidates and the analysis of these strategies according to gender difference. According to the findings, it is determined that teacher candidates benefit from different problem solving strategies existing in the literature.

It is thought that investigation of problem solving, which has great importance in the field of mathematics as in many other areas, in geometry classes provides an important contribution to mathematics education by helping students develop their reasoning and problem solving skills, which is one of the aims of mathematics teaching, and providing these skills to be used later in life (Yılmaz, 2007).

Key Words: Geometry, problem solving, problem solving strategies.
INTRODUCTION

As the purpose of geometry teaching, which is one of the most important branches of mathematics education, is to provide students with the ability of critical thinking, problem solving, and a better understanding of the other subjects of mathematics by giving students a high level of geometrical thinking skills (Şahin, 2008), the place of geometry is quite large in our educational system (Yılmaz & Turgut, 2007). The need for splitting a part of a plane correctly created geometry which is the knowledge of measuring objects and shapes and describing it with numbers. For this reason, the geometry course is quite related to people's daily lives. Therefore, geometry subjects usually attract people's attention and arouse interest in human (Fidan, 1986).

Problem is the case which evokes desire to solve in people, solution process does not exist but can be solved by using one’s knowledge and experiences (Olkun & Tolu k, 2004). According to Baykul (1999), problem is a work, in which an individual who is facing it feel the need for solving or want to solve it, s/he does not have a way how to solve it and s/he tries to solve it. We can usually describe problem solving as to produce simple applications of learned rules in order to formulize a new answer or develop a solution (Kılıç, 2003). However, problem solving should not be oversimplified as to answer a math question. Problem solving is a way of thinking, reasoning and using the things learned in all the math activities (Okur ve diğer., 2006). As understanding the information and establishing a relationship between information occurs in the problem solving process, problem solving is in the centre of education in recent years in our country as in many countries (Şahin, 2007). Problem solving is very important in mathematics classes as it is in many areas, because one of the aims of teaching mathematics is to develop students' thinking, problem solving skills and make these skills be used later in life (Yılmaz, 2007). The developments in the field of mathematics show that students must acquire the ability of problem solving. The students who acquire the ability and habit of problem solving in school years take part as individuals who can take care of the problems in the community life in the future (Şahin, 2007).

There are many factors that affect problem solving but one of the most important of these factors is to choose and use the appropriate strategy. Therefore, the strategy for each problem is different. The appropriate strategy makes the problem solvers think about the meanings of both problem sentence and the mathematical equation. Problem solving is the work of establishing a correlation between the things given and requested. Establishing this correlation correctly happens with the help of strategies. According to the researchers, strategies are containable and conscious activities which carry out cognitive objectives (Pressley, 1995). As many strategies can be used for a type of problem, a strategy can also be used for many problems (Şahin, 2007). Some of the strategies that are often used for the solutions of geometry problems and their definitions are like that;

**Making a Drawing:** What is meant by the word drawing here is all the drawings that help the correlation and the data given in the problem become visible. These can be simple lines, geometrical shapes, dots, etc. (Arslan, 2002).

**Intelligent Guessing and Testing Strategy:** With this strategy, the answer of the problem is guessed while solving a problem and whether the guess is correct or not is tested. If it is correct, the problem is solved. If it is incorrect, new guesses are made. This process goes on until the correct answer is found (Altun, 2002).

**Simplifying the problem:** The problem is divided into sub-problems when encountered with wide complex problems in this strategy. Each sub-problem is any problem that simplifies the solution of the original problem. The successive simplifying process goes on until all the sub-problems are solved easily. Then these separated parts are recombined for the solution of the original problem (Dhillon, 1998).
Using Known Information: When solving a problem, we sometimes use the formula, correlation or relationship we know beforehand.

Brainstorming: Brainstorming is a good strategy for raising the quality and the number of the solution. First the problem is defined, and then all the possible solutions are put forward uncritically. Then by making criticism, the most applicable and practical solution is estimated and the best one is chosen (Dhillon, 1998).

The issue of problem solving, which is so important as to take place in the center of mathematics education, is fairly investigated by educators. When we look at the literature, Elçin Emre (2008) has investigated secondary school students’ skills of using problem solving strategies in her master’s thesis and reached the conclusion that students are quite willing to use a strategy they have learned. Elçin Emre has also observed that students can use the strategies they have learned appropriately in their homework after the strategy teaching. In his study, Israel (2003) has examined problem solving strategies used by 8th grade students in terms of level of success, gender, and socio-economic level variables and reached the conclusion that there is a significant relation between problem solving strategies and the level of success, socio-economic level and gender. Yazgan (2007) has conducted research on intelligent guessing and testing, making a drawing, finding a correlation, simplifying the problem, making a systematic list and working backwards strategies with 4th and 5th grade students who participated in the survey. As a result of this study, it is seen that students can use guessing and testing, making a drawing, making a systematic list and working backwards strategies without difficulty. The ones students had difficulty in while practicing are determined as finding a correlation and simplifying the problem strategies.

In the study conducted by Altun and the others (2007), the thoughts of the students in teacher training programs about problem solving strategies were examined besides the effects of the training whose topic is problem solving strategies on the problem solving success. The teaching has been effective for the teaching of all the strategies except for writing equations and reasoning and led to an increase in problem solving success. It is determined that the success of problem solving can be explained by three factors and it is concluded that the strategies that are strong in pointing the problem solving success are as follows respectively; finding a correlation, working backwards, simplifying the problem, making a systematic list, reasoning and drawing a diagram. All the students indicated that teaching of the strategies that are the subject of the study must be included in teacher training.

Although there are quite a lot of source on problem solving in the literature, there are limited resources about elementary school mathematics teacher candidates’ problem solving skills and strategies. Whereas, the investigation of elementary school mathematics teacher candidates’ problem solving skills and strategies, which will be one of the most important factors in the development of problem solving skills that is in the centre of the objectives of elementary school mathematics classes, is very important for mathematics education. Also, the study of the geometry problems, which have always had an important place in our lives and been relevant to our daily lives, will be quite important for mathematics education. For this reason, the investigation of elementary school mathematics teacher candidates’ geometry problem solving strategies will provide an important contribution to mathematics education.

Aim
In this study, the geometry problem solving strategies used by elementary mathematics teacher candidates were tried to determine.

METHOD
In this study, descriptive research technique was used to examine research problem. This method is used for the research that try to describe and explain the cases’ forms, actions and changes and their similarities and differences with other cases (Gall, Borg, & Gall, 1996). In this study, semi-structured interview was used among qualitative research methods and open ended questions were asked to determine the students’ problem solving strategies.
The Working Group
The working group consists of 20 teacher candidate students, 10 girls and 10 boys, who were the first year students at Buca Faculty of Education Elementary Mathematics Education program in 2012-2013 spring semester.

Data Collection Tool
The data of the study was collected by using “the form of determining geometry problem solving strategies” consisting of open-ended questions and semi-structured interview form to determine teacher candidates’ problem-solving strategies. While the data collection tools were prepared, curriculum, textbooks, NTCM criteria were taken into consideration and expert opinions were obtained.

FINDINGS AND COMMENTS
The percentages of the findings on the strategies used by the teacher candidates in accordance with the interviews with teacher candidates and the scale applied to teacher candidates were shown in Table 1.

Table 1: Percentage of elementary mathematics teacher candidates' use of strategies

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Number of People Using the Strategy</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Making a Drawing</td>
<td>20</td>
<td>100 %</td>
</tr>
<tr>
<td>Intelligent Guessing and Testing</td>
<td>7</td>
<td>35 %</td>
</tr>
<tr>
<td>Brainstorming</td>
<td>8</td>
<td>40 %</td>
</tr>
<tr>
<td>Using Known Information</td>
<td>20</td>
<td>100 %</td>
</tr>
<tr>
<td>Simplifying the problem</td>
<td>13</td>
<td>65 %</td>
</tr>
</tbody>
</table>

According to the data obtained, all the teacher candidates participating in the study used making a drawing strategy while solving a geometry problem. The question “In some geometry questions, do you try to improve the question visually or in order to see the question visually do you change the question into a visual expression by using the data in cases where the data is verbal?” was asked in the interview to identify whether the teacher candidates use making a drawing strategy or not and some of the answer they give are like that;

S.1- Yes. Because when I see the question visually, I solve it easier and I find the solution more quickly.

S.2- Yes. I solve the question by changing it into a visual. Because geometry questions are more about seeing than memorizing.

S.3- Yes. I think about where to draw the lines. I change a verbal question into visual and then I solve it, I have difficulty in reaching the solution if I cannot see.

S.4- Yes. I like drawing and solving the questions is more attractive to me with the shapes I draw, it makes me relax.

Besides, some of the problem solutions that are in the form of determining the geometry problem solving strategies and teacher candidates use making a drawing strategy, are like that;
35% of the teacher candidates involved in the research used guessing and testing strategy while solving geometry problems. The question “In some geometry questions, thinking that the answer of the question should be in a certain interval, do you check whether it is correct or not by putting the values in that interval into the solution without making an operation?” was asked in the interview to identify whether the teacher candidates use guessing and testing strategy or not and some of the answers given are like that;

S.3- My aim is to solve the question. I cannot find the solution of the question by guessing.

S.4- I never do. I try to solve the question directly in order not to waste time. Guessing and testing that value takes too much time.

S.6- Yes. First, thinking an interval, I find the value interval for myself, I try to reach the result by checking the values in that interval.

S.7- Yes, I sometimes do. For example; thinking that the answer is between 20 and 25, I try each and every value in that interval.

40% of the teacher candidates involved in the research used brainstorming strategy while solving geometry problems. The question “While solving a geometry problem, thinking of several ways to solve the problem, do...
you try to reach the solution by choosing the most applicable and practical one among them?" was asked in the interview to identify whether the teacher candidates use brainstorming strategy or not and some of the answers given are like that;

S.1- Yes. I generally find several ways for solution but I choose the most practical way. I choose the way that the least likely to make mistakes for me.

S.2- No. I choose the first way that comes to my mind when I see the question, I am not much interested in whether the way of solution is long or short.

S.6- No. I apply the first one that comes to my mind. For me, it is the most practical way. I can reach the result easily in that way, so I do not think of several ways for solution. Only if I cannot reach the solution in that way, I think of another way.

S.7- Yes. I think of a lot of ways for solution and then I choose the one which will give me the short and certain solution.

All the teacher candidates participating in the study used using known information strategy while solving a geometry problem. The question “To reach the solutions of geometry questions, do you benefit from the formulas, correlations or relationships you have already known?” was asked in the interview to identify whether the teacher candidates use using known information strategy or not and some of the answers they give are like that;

S.2- Yes. If I encounter with very complex operations while solving the question, I use the formulas and correlations I previously know and I reach the solution more easily. Rather than making a long operation, I use the formula if I know it to be more practical.

S.6- Yes, I do. I solve the problem and reach the solution more easily by using a formula.

S.7- Yes. I generally use the formulas because formulas sound more accurate to me.

Also, some of the problem solutions that are in the form of determining the geometry problem solving strategies and teacher candidates use using known information strategy, are like that;

S.10

\[ M(ABD)=60^\circ \]
\[ m(ABD)=10^\circ \]
\[ |AC|=|CD| \]
\[ |BC|=1 \text{ cm} \]
\[ |AD|=? \]
65% of the teacher candidates involved in the research used simplifying the problem strategy while solving geometry problems. The question “Do you try to solve a complex geometry problem by breaking it into simpler parts?” was asked in the interview to identify whether the teacher candidates use simplifying the problem strategy or not and some of the answers they give are like that;

S. 2- Yes. I break it into small parts if the question is too complex and I try to reach the whole. For example, while finding the area of octagon, I draw a square out of it and I find the whole area based on the small squares.

S.5- Yes. I generally solve the complex questions by breaking them into parts. I do like that with polygons or complex triangle questions.

S.6- Yes. For example, I can solve a question with hexagon by breaking it into triangles.

S.8- Yes. Going from part to whole is more logical. For example, in order to find the area of the trapezoid, it is easier to find the area of the two triangles, drawing a diagonal, than using a formula.

The percentages of the findings on the strategies used by the teacher candidates according to the gender are given in Table 2.
Table 2: The percentages of elementary mathematics teacher candidates’ use of strategies according to the gender

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawing a Shape</td>
<td>100 %</td>
<td>100 %</td>
</tr>
<tr>
<td>Guessing and Testing</td>
<td>30 %</td>
<td>40 %</td>
</tr>
<tr>
<td>Brainstorming</td>
<td>20 %</td>
<td>60 %</td>
</tr>
<tr>
<td>Using Known Information</td>
<td>100 %</td>
<td>100 %</td>
</tr>
<tr>
<td>Simplifying the problem</td>
<td>70 %</td>
<td>60 %</td>
</tr>
</tbody>
</table>

According to the percentages of strategy use, it is observed that all the male and female teacher candidates use making a drawing and using known information strategy. While 40 % of the male teacher candidates use guessing and testing strategy while solving geometry problems, 30 % of the female teacher candidates use this strategy. While 60 % of the male teacher candidates use brainstorming, 20 % of the female teacher candidates benefit from this strategy. It is determined that male teacher candidates use guessing and testing strategy and brainstorming strategy more than female teacher candidates. Besides, while 70 % of the female teacher candidates use simplifying the problem strategy while solving geometry problems, 60 % of the male teacher candidates use this strategy. It is determined that female teacher candidates use simplifying the problem strategy more than male teacher candidates.

CONCLUSIONS, DISCUSSION AND SUGGESTIONS

According to the findings of the study, it is determined that all the elementary mathematics teacher candidates participated in the research use making a drawing and using known information strategies and 65 % of them use simplifying the problem strategy while solving geometry problems. It is observed that while 20 % of the female teacher candidates participated in the research benefit from brainstorming strategy while solving geometry problem, 60 % of the male teacher candidates benefit from this strategy. It is seen that 40 % of teacher candidates use brainstorming strategy overall. It is also determined that 35 % of the elementary mathematics teacher candidates participated in the study use guessing and testing strategy while solving geometry problems. In accordance with the results obtained in this study, recommendations below are presented.

- Different studies may also be conducted in order to determine the different strategies (Solving a Simpler Analogous Problem, Cognitive Research, etc.) used by elementary mathematics teacher candidates in geometry problems.
- Considering the importance of problem solving, it will be useful to give training to teacher candidates because problem solving is an integral part of the mathematics learning process and it is necessary to mention in related classes that problem solving should integrate with the overall mathematics learning process (Kayan & Çakıroğlu, 2008).
- Teachers should be a model to students by using different problem solving strategies in geometry classes and they should encourage students to use different strategies, so it is thought to be useful to give training to teachers and teacher candidates on teaching problem solving strategies.
- Research of secondary school students’ geometry problem solving strategies can also be suggested.
- The relation between problem solving strategies used by the teacher candidates and students’ problem solving strategies can be studied.
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CORRELATES OF INTERNET ANXIETY AMONG AGRICULTURAL STUDENTS
IN ZANJAN UNIVERSITY OF IRAN

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Abstract
Use of technology in general often has unpleasant side effects, which may include strong, negative emotional states (such as Frustration, confusion, anger, anxiety and so on) that arise during interaction with computers. The purpose of this study was to explore the Internet anxiety of agricultural students in Zanjan University of Iran. A survey approach was used in this research. The statistical population was Master of Science agricultural students at Zanjan University who were selected by applying simple random sampling technique. Sample size for students was 118. A questionnaire was developed to interview the subjects of the study of which the validity and reliability were estimated based on opinions of a panel of experts and Cronbach’s alpha coefficient respectively. The results indicated that 24.5% of the students had low level, 45.8% had medium level and 29.7% had high level of Internet anxiety. The t-test revealed that there was a significant difference between Internet anxiety of male and female students and female students had higher Internet anxiety than did male students. Furthermore, one sample t-test result showed that there was a significant difference between Internet anxiety of agricultural students and moderate obtainable Internet anxiety score. Correlation analysis indicated that there was a negative significant relationship between Internet anxiety of students and their Internet experience (p<0.01), Internet self-efficacy (p<0.01) and Internet usage (p<0.05). The results of this research could help universities and educational institutions to better understand their students’ attitudes toward the Internet and will enable them for promoting Internet use by students.

Key Words: Technology, Anxiety, Student, Agricultural Education.

INTRODUCTION
Rapid developments in information technologies have made a considerable impact upon almost every aspect of society (Gordon et al., 2003). These technologies had a great potential for education and can transform the teaching and learning process (Korobili, Togia & Maliali, 2010). The Internet is an information super highway that connects people, data and other computers (Potosky, 2007). It provides a new communication medium that enables access to vast amounts of information across a wide variety of dimensions (Akman & Mishra, 2010). With the enormous advances in communication and Internet technology, the educational system urgently needs the application of this technology in order to enhance the quality of teaching and learning (Liaw, 2002). The Internet provides useful tools and resources for enhancing students’ learning and creates closer contact between students and their professors and fellow classmates. It presents education according to students’ interests and their learning style and makes it possible to provide an increasing variety of distance educational opportunities for those who may not be able to attend a university in person. With everyday
development of using Internet in educational systems in different aspects such as research, education, information seeking, communicating and etc, new problems have also been emerged. Internet anxiety is one of such problems. When students want to use the Internet, they may experience emotional states such as frustration, confusion, anger and anxiety that can affect not only their interaction, but also their productivity, learning, social relationships, and etc. Anxiety is a complex network of different elements – cognition, emotion, biology, behavior and environment – which are linked and trigger one another off (Sanders, 2003). There are three types of anxieties: trait, state and concept-specific (Saade & Kira, 2006). Concept-specific is an anxiety that is associated with a specific situation. Internet anxiety is a concept-specific anxiety because it is a feeling that is associated with a students’ interaction with the Internet. Therefore, Internet anxiety is a new psychological concept has emerged with introducing Internet in human activities. In this context, the construct of computer anxiety has been studied since the beginnings of the 80’s, mostly focusing on the non-cognitive factors such as attitudes, previous experiences with computers, or personality-related factors (Baloglu & Cevik, 2008). There are numerous definitions of computer anxiety in the related literature. For example, according to Beckers, Rikers, and Schmidt (2006) computer anxiety refers to an individuals’ fear or apprehension of working directly with a computer or the anticipation of having to work with computers. Bozionelos (2001) defines computer anxiety as a negative emotional state or negative cognition experienced by an individual when he/she is using a computer or computer equipment. Past researches on computer anxiety showed that computer anxiety has negatively related to attitudes toward computer and computer use (Chua, Chen & Wong, 1999; Chou, 2003; Korobili et al., 2010; Smith & Caputi, 2001; Durndell & Haag, 2002; Popovich et al., 2008; Sam, Othman & Nordin, 2005; North & Noyes, 2002), and Internet use (Joiner et al., 2005; Jackson et al., 2001a, 2001b; Durndell & Haag, 2002; Barbiete & Weiss, 2004; Sam et al., 2005). Furthermore, researchers have found out that computer anxiety is the identifier of Internet anxiety (Thatcher et al., 2007) and women suffer greater anxiety over computers than do men (Abdelhamid, 2002; Durndell & Haag, 2002; Mcilroy et al., 2001; Todman, 2000; Tsai, Lin & Tsai, 2001).

Internet anxiety is, of course, closely related to computer anxiety, but the concepts are distinct (Thatcher and Perrewe, 2002). Internet anxiety is the fear or apprehension that individuals experience when using the Internet (Presno, 1998). In other words, Internet anxiety is a feeling or emotion evoked by the use of web-enabled technologies. The Internet may evoke anxiety because it requires users to learn new terminology and understand new applications that may seem strange to them (Thatcher et al., 2007; Macaulay, 2003). For this reason, many students remain uncomfortable using Internet applications and instead use traditional methods to accomplish tasks that could be performed over the Internet. Presno (1998) identifies four areas of Internet anxiety from her qualitative study:

1. Internet terminology anxiety: anxiety produced by an introduction to a host of new vocabulary words and acronyms.
3. Internet time delay anxiety: anxiety produced by busy signals, time delays, and more and more people clogging the Internet.
4. General fear of Internet failure: a generalized anxiety produced by fear that one will be unable to negotiate the Internet, or complete required work on the Internet.

Past researches on Internet anxiety showed that Internet anxiety has negatively related to Internet use (Joiner et al., 2007; Tsai et al., 2001), and women has higher Internet anxiety than do men (Shamo, 2001). In addition, Internet anxiety has negative relationship with Internet self-efficacy (Presno, 1998; Zhang, 2003; Sun, 2008; Ekizoglu & Ozcinar, 2010) and Internet identification (Joiner et al., 2007; Joiner et al., 2005; Bhown & Cheshta, 2006).

The goal of this research was to explore the Internet anxiety among M.Sc. agricultural students in Zanjan University of Iran. Specific objectives of the study were to:

1. Evaluate students’ difference in Internet anxiety with look at gender;
2. Evaluate difference between Internet anxiety of students and moderate obtainable Internet anxiety score; and;
3. Examine the relationship between Internet anxiety of students and their Internet self-efficacy, Internet identification, Internet use and Internet experience.
METHODOLOGY

A descriptive, correlational design was employed in the study. Statistical population for the study consisted of Master of Science agricultural students at Zanjan University. A sample of 118 students was selected by using of simple random sampling method.

A questionnaire was used to collect data for this study. The questionnaire was divided into three sections. The first section was used to collect data for demographical characteristics (i.e., age, gender, major, PC ownership, Internet experience and so on) and Internet use by students. The students were asked to report Internet use based on how many hours per a week they had used an Internet. The second section of the questionnaire was the Internet Anxiety Scale (IAS). An IAS which was developed by Ealy (1998) was used to measure students’ anxiety levels towards Internet. Scale having 20 items that measure Internet anxiety on a five-point Likert type scale (1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree). The score range of IAS changes between 20 and 100 with higher score, indicating more Internet anxiety. The third section was the Internet self-efficacy (students’ perceptions about their own abilities toward using the Internet) and Internet identification (the extent to which students’ self-concept is bound up with their perceived ability to use the Internet) scales. The scales were developed to measure Internet self-efficacy and Internet identification using modified version scales from previous study (Joiner et al., 2007; Torkzadeh & Dyke, 2001; Tung & Chang, 2008) and students were asked six and ten questions respectively. The scales were based on a five Likert-type response scale.

The instrument was assessed for content and face validities by a panel of experts consisting of faculty members at Tehran university regarding the relevance of the items and the unambiguity of their formulation. The instrument was pilot tested using M.Sc. students (N=30) in Tehran University, the College of Agriculture who were not part of the main study. Cronbach’s alpha was estimated for the scales used in the study to ensure internal consistency among the items. The reliability of the scales was 0.86, 0.74 and 0.70 for Internet anxiety, Internet identification and Internet self-efficacy respectively, which is considered to be an acceptable index for field research.

The SPSS statistical package program was used to analyze the data and data were analyzed using frequencies, percentages, means, and standard deviation. The independent samples T-test was used to test for differences if any among students’ Internet anxiety. In this manner, one sample t-test was utilized to compare the Internet anxiety score of students with moderate obtainable score. The Pearson product-moment correlation was employed to find a relationship between selected variables with Internet anxiety.

RESULTS

Analyzing the demographic profile of students

Among 118 students, 42 (35.6%) were male and 76 (64.4%) were female. The ages of the participants in this study ranged from 21 to 46 years (M=24, SD=3.07). In terms of their computer-related background, 89.8% subjects had their own computers at home and 10.2% had not. Students’ Internet use ranged 1 to 40 h per week. The average Internet usage was 10 h per week (SD=7.33). With regard to the students Internet experience, 17.7% of the students had less than 3 years, 33.1% had between 3 to 5 years, and 49.2% had more than 5 years experience. Regarding their majors, 24.8% subjects were majoring in animal sciences, 18.6% were studying in crop production and breeding, and the rest studied soil sciences, agricultural extension and education, horticulture, agricultural entomology, or Irrigation. The Grade Point Average (GPA) of students was 16.49.

The mean score of the Internet anxiety was 50.61, SD = 8.98, and ranged from 26 to 75. The students were divided into three groups according to their Internet anxiety scores. The participants in the low Internet anxiety group had a mean score less than 45 while those in the high Internet anxiety group had a mean score more than 55. The third group mean score (moderate level) was 45 to 55. As a result, according to these findings 24.5% of the students had low level, 45.8% had medium level and 29.7% had high level of Internet anxiety.
Table 1: Frequency and percentage of major, gender, Internet experience, and Internet anxiety

<table>
<thead>
<tr>
<th>Demographic profile</th>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal Science</td>
<td>28</td>
<td>24.8</td>
</tr>
<tr>
<td>Crop Production</td>
<td>21</td>
<td>18.6</td>
</tr>
<tr>
<td>Others</td>
<td>69</td>
<td>56.6</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>42</td>
<td>35.6</td>
</tr>
<tr>
<td>Female</td>
<td>76</td>
<td>64.4</td>
</tr>
<tr>
<td>Internet experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 3 year</td>
<td>21</td>
<td>17.7</td>
</tr>
<tr>
<td>3-5 years</td>
<td>39</td>
<td>33.1</td>
</tr>
<tr>
<td>More than 5 years</td>
<td>58</td>
<td>49.2</td>
</tr>
<tr>
<td>Internet Anxiety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>29</td>
<td>24.5</td>
</tr>
<tr>
<td>Medium</td>
<td>54</td>
<td>45.8</td>
</tr>
<tr>
<td>High</td>
<td>35</td>
<td>29.7</td>
</tr>
</tbody>
</table>

Student differences in Internet anxiety

An independent-samples t-test was conducted to compare the Internet anxiety scores for males and females (table 2). The results indicated that there was a significant difference between the scores of males ($M=48.24$, $SD=8.81$) and females ($M=51.92$, $SD=8.86$; $t(116)=-2.167$, $p=0.0325$), in which females had a higher scores than males. The magnitude of the differences in the means was small ($eta^2=0.036$). This claim is made based on the index proposed by Cohen who identified $eta^2=.01$ as indicating small effect, $eta^2=.06$ for moderate effect, and $eta^2=.14$ for large effect (Pallant, 2007).

Table 2: T-test result for Internet anxiety examined by gender

<table>
<thead>
<tr>
<th>Variable</th>
<th>t</th>
<th>df</th>
<th>sig</th>
<th>$eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Anxiety</td>
<td>-2.167</td>
<td>116</td>
<td>0.032*</td>
<td>0.036</td>
</tr>
</tbody>
</table>

*: statistically significant at 5% significance level

Difference between Internet anxiety score and moderate obtainable score

According to Internet anxiety scale, the maximal and minimal obtainable score were 100 and 20 respectively. Thus, moderate score that students can obtain from the scale was 60. In this research, one sample t-test was used to compare the Internet anxiety score of students with moderate obtainable score. As table 3 indicates, there was a significance difference between the Internet anxiety score of students and the moderate obtainable score. The mean difference was -9.389. This meant that Internet anxiety of agricultural students was less than moderate level.

Table 3: One sample t-test for Internet anxiety of students and moderate obtainable score

<table>
<thead>
<tr>
<th>Variable</th>
<th>t</th>
<th>df</th>
<th>sig</th>
<th>Mean Diff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Anxiety</td>
<td>-11.359</td>
<td>117</td>
<td>0.000**</td>
<td>-9.389</td>
</tr>
</tbody>
</table>

**: statistically significant at 1% significance level

Relationships between selected variables and students’ Internet anxiety

A Pearson product-moment correlation matrix was created to determine if there is any relationship between students’ Internet self-efficacy, Internet identification, Internet experience, Internet use and their Internet anxiety. Table 4 displays Pearson correlation analysis between students’ scores on Internet self-efficacy, Internet identification, Internet experience, Internet use and their Internet anxiety. It was found that students’ Internet anxiety and their scores on Internet self-efficacy ($r=-0.388$, $n=118$, $sig=.000$) was negatively significantly correlated. That is, students with higher level of Internet self-efficacy had lower level of Internet anxiety.
anxiety and vice versa. On the other hand, students’ Internet use was negatively significantly related to their Internet anxiety ($r=-0.182$, $n=118$, $sig=.014$). This meant that students who used Internet more often showed lower levels of Internet anxiety compared to those who used Internet less frequently. The results also showed that there was a negative significant relationship between Internet experience of students and their Internet anxiety ($r=-0.242$, $n=118$, $sig=0.008$). That is, students who had high level Internet experience showed low level of Internet anxiety compared to those who had low level Internet experience.

Table 4: Relationship between selected variables with students’ Internet anxiety

<table>
<thead>
<tr>
<th>Random variable-1</th>
<th>Random variable-2</th>
<th>Correlation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Self-efficacy</td>
<td>Internet Anxiety</td>
<td>-0.388**</td>
</tr>
<tr>
<td>Internet Identification</td>
<td>Internet Anxiety</td>
<td>0.179</td>
</tr>
<tr>
<td>Internet experience</td>
<td>Internet Anxiety</td>
<td>-0.242**</td>
</tr>
<tr>
<td>Internet use</td>
<td>Internet Anxiety</td>
<td>-0.182*</td>
</tr>
</tbody>
</table>

*: statistically significant at 5% significance level  
**: statistically significant at 1% significance level

CONCLUSION

The overall aim of this study was to explore the Internet anxiety of agricultural students in Zanjan University of Iran. According to results, there was a moderate negative and statistically significant correlation between students’ Internet anxiety and their Internet self-efficacy. The finding was in line with results of other researches (Presno, 1998; Zhang, 2003; Sun, 2008). It means that students with high level Internet self-efficacy were more confident about using the Internet and will experience low level Internet anxiety. Hence, encouraging students to engage in Internet activities and providing useful experience for them are the ways for creating self-efficacy in students. Social persuasion is another way of raising students’ Internet self-efficacy. Students’ beliefs about their ability to master a situation (i.e. Internet) are influenced by what they hear from their teachers, parents, classmates, and friends. Students who receive strong messages that they have the skills and capabilities to handle a situation are more likely to put in greater effort and to persist in the face of setback.

This study found that there was a small negative and statistically significant relationship between students’ Internet anxiety and their Internet use. This finding was consistent with previous research (Joiner et al., 2007; Tsai et al., 2001). That is, students who were more anxious about using the Internet used the Internet less. Training students in Internet skills is useful way to increase students’ familiarity with the Internet, and may thus decrease their Internet anxiety.

According to results, there was a small negative and statistically significant correlation between students’ Internet anxiety and their prior Internet experience. It means that students’ prior technical skills in using the Internet may decrease their Internet anxiety. Thus, increasing students’ prior Internet experience will results in lowering their level of Internet anxiety.

It was also found that women show higher levels of Internet anxiety than men. Similar findings were reported by other researchers (Shamo, 2001). The results of this research could help planners and managers of higher education institutions to better understand their students’ attitudes toward the Internet and will enable them for decreasing their anxiety and increasing Internet use in educational activities.

REFERENCES


EXAMINING SCHOOLING AGE FOR THE 1ST GRADE OF PRIMARY SCHOOL ACCORDING TO THE VIEWS OF PRIMARY SCHOOL MANAGERS AND TEACHERS

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Abstract
The aim of this research was to investigate the views of managers and teachers regarding schooling age. The research was regulated in accordance with the screening model. And a relational scan was conducted to test the effects of independent variables on result. The relation between the managers’ and teachers’ variables on professional seniority, branch and place of duty and the factors that affect the schooling age on primary school was investigated. A total of 55 managers and 178 teachers, a total of 232 participants, who work in ten different counties in the Erzurum province constituted the research sample. The data were collected through a questionnaire developed by the researcher based on expert opinion. Chi-square analysis was applied to analyze the data. In this study, not only the calendar age of primary freshman students, but also the social, physical and mental characteristics should be taken into consideration was concluded.

Key Words: Calendar age, schooling age of primary school, the classroom teacher, school manager. CT.

INTRODUCTION
Starting school is one of the most important events in a child’s educational life. Starting school requires mental, physical emotional and social maturity (Ülkü, 2007). The period from 0 to 6 years constitutes the fastest and most critical years of a child’s development. There is a high chance that if the foundations of physical health and personality structure are laid in these years, they will develop in the same course without changing direction in later ages (Oktay, 1998; Oktay, 2003).

Varying research in this century has highlighted the concept of “schooling maturity”. Some of these researchers have investigated this concept more broadly with regards to earning school-related skills comfortably whereas some researchers have further narrowed the subject by investigating in terms of “reading maturity”. However,
both school maturity and reading maturity aim to ensure a child’s entire development in order to reach a certain level (Oktay, 1980).

One must be ready before starting primary school. As previously mentioned, readiness is the physical, mental, emotional and experiential development stage in which children have the ability to understand a certain thing easily and comprehensively and are eager to learn. Children must be ready to experience any learning (Kılıç, 2008; Ryan Jr., 2003; Oktay and Unutkan, 2005).

Literacy is a bridge that is built among students, teachers and families. Bringing the family culture to the school, children create a school culture with the family culture (Tomkins, 1997). The fact that the families participate in school activities and exhibit supportive attitudes in literacy activities is among the important factors that increase children’s school success (Little and Box, 2002). The fact that the families effectively participate in their children’s first literacy activities as well as their interaction with their children has a significant effect in developing their first literacy skills (Ortiz, 2001; Morrow, 1993).

Today, schooling age and related procedures differ in the countries of the world. In Germany, France, Belgium and Austria the compulsory schooling age is six. Education before this age is on a voluntary basis (Kantos, 2011; Memduhoğlu, 2011; Yılmaz, 2011).

The compulsory schooling age is 5 in the United Kingdom (Erginer, 2009). Children start primary school through guidance in the United States of America since each state has formed its own educational system (Harmanci, 2011). The traditional schooling age is 6 in Japan (Telci, 2011).

The procedure for starting school is decided with families and children under the supervision of experts in many developed countries such as the United Kingdom, the United States of America and Northern European countries. When the calendar age is taken as a basis, children start primary school in the same age range in many countries. Although this age ranges from five to eight, generally children who have reached six or seven years of age start primary school. Reading maturity is of top priority for starting school.

Today, in Turkey, a child’s readiness for primary school is decided by taking the calendar age as a basis, and every child aged 66-72 months starts primary school (MEB [Ministry of National Education], 2006, 2012). It is a matter of debate to what degree this condition is healthy. It is supported with recently conducted research that it is more important to consider the physical, social, emotional, cognitive and self-care fields apart from calendar age basis while deciding whether children should start school (Çelenk, 2003; Yapıcı, 2004).

It is also among the debated issues that parents should not be the sole authority in deciding whether the child is ready for school and will continue studying in the 1st grade and that teachers and guidance counselors must participate in this process.

Aim of the Research
Schooling age for the 1st grade of primary school was examined in this study according to the views of primary school managers and classroom teachers.
1. Do schools with different socio-economic levels affect schooling age?
2. Does the educational level of the child’s father affect schooling age?
3. Is there a difference between schools located in rural areas and central schools in terms of schooling age?
4. Does pre-school education affect schooling age?
5. Does the fact that the student’s mother and father live together affect schooling age?
6. Do the climatic conditions in the region where the student lives affect schooling age?
METHOD

Research model, universe and sample, data collection tools, data collection and data analysis are highlighted in this section.

Research Model

In this study, which is of the screening model, relational screening was conducted in order to test the effect of the independent variables of the research on the result. Relational screening models are the research models that aim to determine the existence and/or the degree of change between two or more variables (Karasar, 1998).

Universe and Sample

The universe of the research was composed of managers and teachers working in the primary schools of the Ministry of National Education that are located in Erzurum’s various districts, namely Aşkale, Aziziye, Çat, Hınis, Horasan, Narman, Palandöken, Pasinler, Tortum and Yakutiye in the 2010-2011 school year. The sample of research was composed of 55 managers and 178 teachers working in the primary schools of the Ministry of National Education that are located in Erzurum’s various districts, namely Aşkale, Aziziye, Çat, Hınis, Horasan, Narman, Palandöken, Pasinler, Tortum and Yakutiye in the 2010-2011 school year.

Data Collection

The data of the research was collected via the questionnaire titled “The Views of Classroom Teachers and Primary School Managers on Schooling Age for the 1st Grade of Primary School” which was prepared by the researchers. The questionnaire, which was a 5-point Likert type, was composed of a total of 25 items. The options of the questionnaire items were prepared as follows: “Completely Disagree, Disagree, Partially Agree, Agree and Completely Agree”. The opinions of three field experts were taken regarding the validity of the questionnaire. Examining the questionnaire given to them, stating the ambiguous expressions and options, managers and teachers helped the researcher review and revise the questionnaire to a more comprehensible degree. The internal consistency (Cronbach’s Alpha) of the questionnaire was found to be 0.72.

Data Analysis

The dependent variable of this research was the schooling age for the 1st grade of primary school. The independent variables of this research were managers’ occupational seniority, teachers’ occupational seniority, their fields and the districts where they work. Statistical analysis of the data was studied in a model that would set forth the effect of the independent variables on the dependent variables. Chi-square analysis was used in order to understand whether there was a difference among the items in terms of managers’ occupational seniority, teachers’ occupational seniority, their fields and the districts where they work. The significance level was determined to be 0.05 in data analysis.

FINDINGS AND INTERPRETATIONS

The results and interpretations of the statistical analyses applied to the data that were collected in the research are given under four main headings in this section. The questionnaire, which was prepared in accordance with the conducted study, was administered to the teachers and primary school managers in the districts and district centers (Aşkale, Aziziye, Çat, Hınis, Horasan, Narman, Palandöken, Pasinler, Tortum and Yakutiye) located within the boundaries of Erzurum province. The obtained data were graded in a range from 1 to 5 using a statistical package program, and chi-square analysis was conducted on the data. The data of the participants who marked their occupational seniority as 11-15 years, 16-20 years and 21 years or over were combined with the data of the participants who had 6-10 years of occupational seniority and they were collectively taken as six years or over in order for the chi-square analysis to yield more accurate and clear results. Furthermore, the main fields were Turkish, Mathematics, Science and Technology, Social Sciences and English whereas Religious Culture and Moral Knowledge, Physical Education, Visual Arts, Music, Information Technologies, Technology-Design and Counseling, the areas of the teachers and primary school managers, were taken as the other fields. The obtained results were given as tables, and the interpretations are presented below the tables.
Table 1: The Distribution of “the Effect of Schools with Different Socio-economic Levels on Schooling Age” in Terms of the Fields of Primary School Managers and Teachers

<table>
<thead>
<tr>
<th>Teachers’ Occupational Seniority</th>
<th>Completely Disagree</th>
<th>Disagree</th>
<th>Partially Agree</th>
<th>Agree</th>
<th>Completely Agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Teacher n</td>
<td>21</td>
<td>15</td>
<td>31</td>
<td>32</td>
<td>25</td>
<td>124</td>
</tr>
<tr>
<td>%</td>
<td>16.9</td>
<td>12.1</td>
<td>25</td>
<td>25.8</td>
<td>20.1</td>
<td>100</td>
</tr>
<tr>
<td>Mathematics Turkish n</td>
<td>10</td>
<td>14</td>
<td>8</td>
<td>32</td>
<td>15</td>
<td>79</td>
</tr>
<tr>
<td>%</td>
<td>12.6</td>
<td>17.7</td>
<td>10.1</td>
<td>40.5</td>
<td>18.9</td>
<td>100</td>
</tr>
<tr>
<td>Social Sciences %</td>
<td>6.8</td>
<td>24.1</td>
<td>31.1</td>
<td>20.6</td>
<td>17.2</td>
<td>29</td>
</tr>
<tr>
<td>Science and Technology n</td>
<td>2</td>
<td>7</td>
<td>9</td>
<td>6</td>
<td>5</td>
<td>29</td>
</tr>
<tr>
<td>%</td>
<td>14.2</td>
<td>15.5</td>
<td>20.6</td>
<td>30.1</td>
<td>19.3</td>
<td>100</td>
</tr>
<tr>
<td>Total n</td>
<td>33</td>
<td>36</td>
<td>48</td>
<td>70</td>
<td>45</td>
<td>232</td>
</tr>
<tr>
<td>%</td>
<td>14.2</td>
<td>15.5</td>
<td>20.6</td>
<td>30.1</td>
<td>19.3</td>
<td>100</td>
</tr>
</tbody>
</table>

S.D.= 8                                                                                     χ²= 15.874                                                                   p= 0.044

Chi-square analysis was conducted on the given answers in order to understand whether “schools with different socio-economic levels affect schooling age” in terms of the fields of primary school managers and teachers. χ² value was calculated as 15.874 and p = 0.044; this was found to be significant at the p < 0.05 significance level. This finding shows that there is a difference in “the effect of schools with different socio-economic levels on schooling age” in terms of the fields of primary school teachers. When the table is examined, it is observed that 26% of the classroom teachers, 40% of the teachers of main fields (Mathematics, Turkish, Science and Technology, Social Sciences and English) and 21% of teachers of other fields marked the “Agree” option. Consequently, it can be stated that the teachers of main fields exhibited a higher degree of agreement with the idea that schools with different socio-economic levels affect schooling age.

Table 2: The Effect of the Educational Level of the Student’s Father on Schooling Age

<table>
<thead>
<tr>
<th>Teachers’ Occupational Seniority</th>
<th>Completely Disagree</th>
<th>Disagree</th>
<th>Partially Agree</th>
<th>Agree</th>
<th>Completely Agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Teacher n</td>
<td>16</td>
<td>20</td>
<td>27</td>
<td>48</td>
<td>13</td>
<td>124</td>
</tr>
<tr>
<td>%</td>
<td>12.9</td>
<td>16.1</td>
<td>21.7</td>
<td>38.7</td>
<td>10.4</td>
<td>100</td>
</tr>
<tr>
<td>Mathematics Turkish n</td>
<td>14</td>
<td>7</td>
<td>18</td>
<td>25</td>
<td>15</td>
<td>79</td>
</tr>
<tr>
<td>%</td>
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<tr>
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<td>%</td>
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<td>6.8</td>
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<td>Total n</td>
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</table>

S.D.= 8                                                                                     χ²= 19.411                                                                   p= 0.013
Chi-square analysis was conducted on the given answers in order to understand whether there was a difference in the degree to which primary school managers and teachers agree with the idea that “the educational level of the student’s father affects schooling age” in terms of their fields. χ² value was calculated as 19.411 and p = 0.013; this was found to be significant at the p < 0.05 significance level. This finding shows that there is not an important difference in “the effect of the educational level of the student’s father on schooling age” in terms of the fields of primary school managers and teachers. When the table is examined, it is observed that 39% of the classroom teachers, 32% of the teachers of main fields and 38% of teachers of other fields marked the “Agree” option. Consequently, it can be stated that the classroom teachers exhibited a higher degree of agreement with the idea that the educational level of the student’s father affects schooling age.

Table 3: Is There a Difference Between Schools Located in Rural Areas and Central Schools in Terms of Schooling Age?

<table>
<thead>
<tr>
<th>District</th>
<th>Completely Disagree</th>
<th>Disagree</th>
<th>Partially Agree</th>
<th>Agree</th>
<th>Completely Agree</th>
<th>Total</th>
</tr>
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<td>13</td>
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<td>69.2</td>
<td>15.3</td>
<td>100</td>
</tr>
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<td>2</td>
<td>1</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>% 10</td>
<td>30</td>
<td>20</td>
<td>10</td>
<td>30</td>
<td>100</td>
</tr>
<tr>
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<td>20</td>
<td>70</td>
<td>0</td>
<td>100</td>
</tr>
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<td>2</td>
<td>0</td>
<td>11</td>
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<td></td>
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<td>9.1</td>
<td>63.6</td>
<td>18.1</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Horasan</td>
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<td>7</td>
<td>26</td>
<td>33</td>
<td>19</td>
<td>95</td>
</tr>
<tr>
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</tr>
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<td>3</td>
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<tr>
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<td>2</td>
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<td>17</td>
</tr>
<tr>
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<td>23.5</td>
<td>11.7</td>
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<td>100</td>
</tr>
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<td>8</td>
<td>5</td>
<td>2</td>
<td>22</td>
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<tr>
<td></td>
<td>% 13.6</td>
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<td>9.1</td>
<td>100</td>
</tr>
<tr>
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<td>1</td>
<td>5</td>
<td>1</td>
<td>9</td>
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<tr>
<td></td>
<td>% 0</td>
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<td>11.1</td>
<td>100</td>
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<td>5</td>
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<td>73</td>
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<td>27.5</td>
<td>31.4</td>
<td>15.5</td>
<td>100</td>
</tr>
</tbody>
</table>

S.D.= 4

\[ \chi^2 = 81.319 \quad p = 0.00 \]

Chi-square analysis was conducted on the given answers in order to understand whether there was a difference in the degree to which primary school managers and teachers agree with the idea that “there is a difference between schools located in rural areas and central schools regarding schooling age” in terms of the district where they work. χ² value was calculated as 81.319 and p = 0.00; this was found to be significant at the p < 0.05 significance level. This finding shows that there is not an important difference in “the effect of the difference between schools located in rural areas and central schools on schooling age” in terms of the district where managers and teachers work. When the table is examined, it is observed that 31% of the managers and teachers marked the “Agree” option in terms of the district where they work. Consequently, it can be stated that the teachers working in Çat exhibited a higher degree of agreement with the idea that there is a difference between schools located in rural areas and central schools regarding schooling age.
Table 4: The Effect of Pre-School Education on Schooling Age

<table>
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<th>District</th>
<th>Completely</th>
<th>Disagree</th>
<th>Disagree</th>
<th>Partially</th>
<th>Agree</th>
<th>Completely</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Aşkale</td>
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<td>0</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td></td>
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<td>0</td>
<td>7.6</td>
<td>46.1</td>
<td>46.1</td>
<td>0</td>
<td>100</td>
</tr>
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<td>0</td>
<td>0</td>
<td>7</td>
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<td>30</td>
<td>100</td>
<td>10</td>
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</tr>
<tr>
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<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>% 0</td>
<td>10</td>
<td>20</td>
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<td>30</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Hınıs</td>
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<td>1</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
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<td>100</td>
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</tr>
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<td>28</td>
<td>37</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td></td>
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<td>23.1</td>
<td>29.4</td>
<td>38.9</td>
<td>100</td>
<td></td>
</tr>
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<td>25</td>
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</tr>
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<td>4</td>
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<td>12</td>
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<td></td>
</tr>
<tr>
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<td>3</td>
<td>8</td>
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<td>% 20</td>
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<td>40</td>
<td>15</td>
<td>100</td>
<td></td>
</tr>
<tr>
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<td>81</td>
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<td>35.7</td>
<td>34.9</td>
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</tr>
</tbody>
</table>

S.D.= 36  \( \chi^2= 56.856 \)  \( p=0.015 \)

Chi-square analysis was conducted on the given answers in order to understand whether there was a difference in the degree to which primary school managers and teachers agree with the idea that “the pre-school education affects schooling age” in terms of the district where they work. \( \chi^2 \) value was calculated as 56.856 and \( p =0.015 \); this was found to be insignificant at the \( p < 0.05 \) significance level. This finding shows that there is not an important difference in “the effect of pre-school education on schooling age” in terms of the district where managers and teachers work. When the table is examined, it is observed that 36% of the managers and teachers marked the “Agree” option in terms of the district where they work. Consequently, it can be stated that the teachers working in Aziziye exhibited a higher degree of agreement with the idea that the pre-school education affects schooling age.

Table 5: The Effect of the Parents’ Marital Status on Schooling Age

<table>
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<th>District</th>
<th>Completely</th>
<th>Disagree</th>
<th>Partially</th>
<th>Agree</th>
<th>Completely</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>1</td>
<td>5</td>
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<td>0</td>
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<td></td>
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<td>38.4</td>
<td>53.8</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Aziziye</td>
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<td>1</td>
<td>2</td>
<td>4</td>
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<td></td>
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<td>20</td>
<td>40</td>
<td>30</td>
<td>100</td>
</tr>
<tr>
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<td>0</td>
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<td>0</td>
<td>11</td>
</tr>
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</tr>
<tr>
<td>Horasan</td>
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<td>12</td>
<td>27</td>
<td>27</td>
<td>18</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>% 11.5</td>
<td>12.6</td>
<td>28.4</td>
<td>28.4</td>
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<td>100</td>
</tr>
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<td>5</td>
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<td>25</td>
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<td>20</td>
<td>12</td>
<td>100</td>
</tr>
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<td>2</td>
<td>4</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td></td>
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<td>35.2</td>
<td>11.7</td>
<td>23.5</td>
<td>29.4</td>
<td>100</td>
</tr>
</tbody>
</table>
Chi-square analysis was conducted on the given answers in order to understand whether there was a difference in the degree to which primary school managers and teachers agree with the idea “that the student’s mother and father live together affects schooling age” in terms of the district where they work. χ² value was calculated as 73.438 and p = 0.000; this was found significant at the p < 0.05 significance level. This finding shows that there is an important difference in the degree to which managers and teachers agree with the idea “that the student’s mother and father of live together affects schooling age” in terms of the district where they work. When the table is examined, it is observed that 28% of the managers and teachers marked the “Agree” option in terms of the district where they work. Consequently, it can be stated that the teachers working in Aşkale exhibited a higher degree of agreement with the idea that the student’s mother and father live together affects schooling age.

Table 6: The Effect of the Climatic Conditions in the Region Where the Student Lives on Schooling Age

<table>
<thead>
<tr>
<th>District</th>
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<th>Disagree</th>
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<th>Agree</th>
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<th>Total</th>
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</tr>
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<td>3</td>
<td>0</td>
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</tr>
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<td>30</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>Çat</td>
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<td>1</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
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<td></td>
<td>%</td>
<td>20</td>
<td>10</td>
<td>0</td>
<td>30</td>
<td>30</td>
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<tr>
<td>Hınıs</td>
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<td>18.1</td>
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<td>24</td>
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<td>36</td>
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<tr>
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<td>9</td>
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<td>3</td>
</tr>
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<td></td>
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<td>17.6</td>
<td>0</td>
<td>52.9</td>
<td>11.7</td>
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<td>8</td>
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<td>1</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>4.5</td>
<td>40.9</td>
<td>36.3</td>
<td>13.6</td>
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</tr>
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<td>Tortum</td>
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<td>0</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>%</td>
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<td>0</td>
<td>55.5</td>
<td>22.2</td>
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</tr>
<tr>
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<td>2</td>
<td>7</td>
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<td>1</td>
</tr>
<tr>
<td></td>
<td>%</td>
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<td>10</td>
<td>35</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
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<td></td>
<td>%</td>
<td>15.9</td>
<td>21.1</td>
<td>23.7</td>
<td>22.8</td>
<td>16.3</td>
</tr>
</tbody>
</table>

S.D.= 36, χ²= 73.438, p= 0.000

Chi-square analysis was conducted on the given answers in order to understand whether there was a difference in the degree to which primary school managers and teachers agree with the idea “the climatic conditions in the region where the student lives affect schooling age” in terms of the district where they work. χ² value was calculated as 67.213 and p = 0.001; this was found significant at the p < 0.05 significance level. This finding shows that there is an important difference in the degree to which managers and teachers agree with the idea “the climatic conditions in the region where the student lives affect schooling age” in terms of the district where they work. When the table is examined, it is observed that 28% of the managers and teachers marked the “Agree” option in terms of the district where they work. Consequently, it can be stated that the teachers working in Aşkale exhibited a higher degree of agreement with the idea that the student’s mother and father live together affects schooling age.

Table 6: The Effect of the Climatic Conditions in the Region Where the Student Lives on Schooling Age

<table>
<thead>
<tr>
<th>District</th>
<th>Completely Disagree</th>
<th>Disagree</th>
<th>Partially Agree</th>
<th>Agree</th>
<th>Completely Agree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aşkale</td>
<td>n</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0</td>
<td>7.6</td>
<td>30.7</td>
<td>46.1</td>
<td>15.3</td>
</tr>
<tr>
<td>Aziziye</td>
<td>n</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>0</td>
<td>40</td>
<td>30</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>Çat</td>
<td>n</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>20</td>
<td>10</td>
<td>0</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Hınıs</td>
<td>n</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Horasan</td>
<td>n</td>
<td>16</td>
<td>24</td>
<td>16</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>16.8</td>
<td>25.2</td>
<td>16.8</td>
<td>22.1</td>
<td>18.9</td>
</tr>
<tr>
<td>Narman</td>
<td>n</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>28</td>
<td>24</td>
<td>4</td>
<td>36</td>
<td>8</td>
</tr>
<tr>
<td>Palandöken</td>
<td>n</td>
<td>3</td>
<td>0</td>
<td>9</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>17.6</td>
<td>0</td>
<td>52.9</td>
<td>11.7</td>
<td>17.6</td>
</tr>
<tr>
<td>Pasinler</td>
<td>n</td>
<td>1</td>
<td>9</td>
<td>8</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>4.5</td>
<td>40.9</td>
<td>36.3</td>
<td>13.6</td>
<td>4.5</td>
</tr>
<tr>
<td>Tortum</td>
<td>n</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>11.1</td>
<td>0</td>
<td>55.5</td>
<td>22.2</td>
<td>11.1</td>
</tr>
<tr>
<td>Yakutiye</td>
<td>n</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>30</td>
<td>10</td>
<td>35</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>n</td>
<td>37</td>
<td>49</td>
<td>55</td>
<td>53</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>15.9</td>
<td>21.1</td>
<td>23.7</td>
<td>22.8</td>
<td>16.3</td>
</tr>
</tbody>
</table>

S.D.= 36, χ²= 67.213, p= 0.001
with the idea that “the climatic conditions in the region where the student lives affect schooling age” in terms of the district where they work. When the table is examined, it is observed that 24% of the managers and teachers marked the “Partially Agree” option in terms of the district where they work. Consequently, it can be stated that the teachers working in Tortum partially agreed with the idea that the climatic conditions in the region where the student lives affect schooling age.

**DISCUSSION AND CONCLUSION**

It is not adequate to take chronological age as the sole criterion for schooling age. The development levels of the children can be identified using developmental tests, and experienced specialist educators can find the overall level of the children by making an objective evaluation. The behavioural level of the children, which can be found to be under or over the chronological age of the children, is a more accurate criterion compared to chronological age when determining schooling age (Banerji, Smith and Dedrick, 1997). When the findings of the research are examined, it is observed that primary school managers and teachers expressed that they consider determining schooling age according to calendar age alone to be incorrect in terms of several variables. These findings correspond with the opinions of Banerji, Smith and Dedrick (1997).

In Turkey, the Ministry of National Education implemented a new regulation on schooling age as of the 2012-2013 school year, and determined that the schooling year is 66-72 months. The ministry showed that it paid attention to the views of parents and other participants. This indicates that schooling age differs according to socio-economic level, the educational level of mothers and fathers, having pre-school education, living in rural or urban areas and climatic conditions.

**WJEIS’s Note 1:** This study was prepared by benefiting from the graduate study entitled “Examining Schooling Age for the 1st Grade of Primary School According to the Views of Primary School Managers and Teachers” that was argued that the Department of Classroom Teaching, Institute of Social Sciences, Atatürk University.

**WJEIS’s Note 2:** This article was presented at World Conference on Educational and Instructional Studies – WCEIS 07-09 November, 2013, Antalya-Turkey and was selected for publication for Volume 4 Number 1 of WJEIS 2014 by WJEIS Scientific Committee.

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AN EVALUATION OF THE CONCEPTS AND PROBLEMS OF PHILOSOPHY OF RELIGION IN TERMS OF TEACHING RELIGION: A STUDY INTO THE UNITS OF PHILOSOPHY OF RELIGION AND RELIGIOUS CONCEPTS IN THE PROGRAMS OF TEACHING PHILOSOPHY

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Abstract
Teaching religion has often been considered from a problematic point of view in terms of our educational system. Carried out in a quite successful way through endowments (waqfs) in the rise of Ottoman period, religious education started to lose its success systematically with the period of regression Ottoman Empire. With the declaration of republic and the law of unification of education, it is not likely to say that religious education within the control of the state achieved the desired success. Religious education had its share from the approach of rejectionist attitude of the young regime which inherited almost all heritage of Ottoman and was not able to have an access to teaching programs in an independent way for a long time. The unit of the philosophy of religion and religious concepts were not given a place in the programs of teaching philosophy for a long time. In the current study, the units of the philosophy of religion and religious concepts in seven teaching programs of philosophy prepared in the period of republic were investigated.

Key Words: Philosophy, religious, philosophy of religion, teaching program.

INTRODUCTION

The introduction of Islam to Turks was in the eras when Islamic culture and civilization was in a magnificent rise. This era of rise comprised the translation movements, which was one of the components that increased the accumulation of knowledge in Islamic world such that a great many works were translated into Arabic from various languages in the world, in particular from Latin. These works, which had mostly a scientific and philosophic content, attracted the interest of Muslims and Turks who had just initiated Islam. Therefore, philosophic subjects were given under such courses, particularly the ones like Kalam in the programs of Seljuk Madrasahs even if it did not take its place in an independent discipline.

Besides that, no courses of philosophy were encountered in the teaching programs of Nizamiyah Madrasahs. However, it did not last longer. It was not regarded as a good approach for some people to teach philosophy at madrasahs the basic objective of which was to teach fiqh and other religious sciences and the courses of philosophy were taken out of the teaching programs of Nizamiyah Madrasahs (Kafadar: 1994: 279). However, taking philosophy courses out of teaching programs was not a real cut out, since philosophical discussions were carried out in the courses of Kalam from that time on; but philosophy was criticised by such scholars as Ghazali in these arguments.

There were some similar cases in terms of Ottoman Madrasahs. In the rising period of Ottoman, it was possible to see philosophy courses in the programs of madrasahs, particularly in the reign of Fatih Sultan Mehmmed. However, the interest in philosophy gradually decreased from that time on and philosophy losts its place in teaching programs. The Second Constitutionalism had a turning point in the history of Ottoman in terms of the course of philosophy; since Emrullah Efendi and Şükrü Bey, who were the ministers of the period, included the course of philosophy in the programs of Sultanis in this era. It was followed by such positive improvements as introducing the courses of philosophy to Darü’l – Fünun and writing of the first philosophy course book by Riza Tevfik in 1910 (Kaynaşdağ, 2002: 85). From that time onwards, the course of philosophy has taken its place in the teaching programs without interruption.
The Place of the Course of Philosophy in the Teaching Programs of Republican Period

The course of philosophy has taken its place without interruption within the high school course curricula of the Republican period. The case of instability and being in the search which was encountered in almost every institution was present in the course of philosophy as well; since a series of issues such as how to teach the course of philosophy, how many hours a week to teach, which fields to be included or with which disciplines to be given, what kind of content to be given have always been discussed. It is likely to see the changes in the weekly course charts in a clear way.

Table 1: The Distribution of the Courses of Philosophy in the High School Programs in the Period of Republic (Dombayci, 2002: 13).

<table>
<thead>
<tr>
<th>Years</th>
<th>Courses</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1924 – 1927</td>
<td>Philosophy</td>
<td>I 2 II 2 III (Sci.) 4 IV (Sci.) - IV (Lit.) -</td>
</tr>
<tr>
<td>1927 – 1931</td>
<td>Philosophy and Sociology</td>
<td>I 2 II 2 III (Sci.) 6 IV (Sci.) - IV (Lit.) -</td>
</tr>
<tr>
<td>1931 – 1934</td>
<td>Philosophy and Sociology</td>
<td>I 2 II 2 III (Sci.) 6 IV (Lit.) -</td>
</tr>
<tr>
<td>1934 – 1937</td>
<td>Philosophy and Sociology</td>
<td>I - II 2 III (Sci.) 6 IV (Lit.) -</td>
</tr>
<tr>
<td>1937 – 1947</td>
<td>Philosophy and Sociology</td>
<td>I - II 3 III (Lit.) 7 IV (Sci.) -</td>
</tr>
<tr>
<td>1947 – 1949</td>
<td>Philosophy and Sociology</td>
<td>I - II 3 III (Sci.) 6 IV (Lit.) -</td>
</tr>
<tr>
<td>1949 – 1952</td>
<td>Philosophy and Sociology</td>
<td>I - II 3 III (Lit.) 6 IV (Sci.) -</td>
</tr>
<tr>
<td>1952 – 1956</td>
<td>Philosophy</td>
<td>I - II 2 III (Sci.) 6 IV (Sc.) 3 IV (Lit.) 5</td>
</tr>
<tr>
<td>1956 – 1957</td>
<td>Philosophy, Logic, Sociology</td>
<td>I - II 3 III (Sci.) 6 IV (Lit.) -</td>
</tr>
<tr>
<td>1957 – 1974</td>
<td>Philosophy, Logic, Sociology</td>
<td>I - II 3 III (Sci.) 6 IV (Lit.) -</td>
</tr>
<tr>
<td>1974 – 1976</td>
<td>Philosophy, Logic, Sociology</td>
<td>I - II 3 III (Sci.) 6 IV (Lit.) -</td>
</tr>
<tr>
<td>1976 – 1985</td>
<td>Philosophy Group</td>
<td>I - II 3 III (Sci.) 6 IV (Lit.) -</td>
</tr>
<tr>
<td>1985 – 1987</td>
<td>Philosophy Group</td>
<td>I - II 3 III (Sci.) 6 IV (Lit.) -</td>
</tr>
<tr>
<td>1987 – 1992</td>
<td>Philosophy Group</td>
<td>I - II 2 III (Sci.) 6 IV (Lit.) -</td>
</tr>
<tr>
<td>1992 – 1998</td>
<td>Philosophy 1 – 2</td>
<td>I - II 2 + 2 = 4 Credit</td>
</tr>
<tr>
<td>1998 and later</td>
<td>Philosophy</td>
<td>I - II 2</td>
</tr>
</tbody>
</table>

As given it the Table, there was a discussion about in which classes of high schools the course of philosophy should be taught, how to relate it with sociology, logic and psychology, to teach them separately or together, what name to give them up to 1998. Besides that, it is not possible to learn about the content of the course from the table which gives information with regard to which classes and how many hours the course was taught.

1 The course of philosophy taught in this period was taught separately from the course of sociology. Even though its name was philosophy, 2 hours psychology at the second year, 2 hours logic at the last year in the science branch and 2 hours logic in the literature branch besides two-hour philosophy courses. In addition the subject of ‘morality’ was given within the course of philosophy.

2 The courses of philosophy and sociology are taught together as 3 hours in three classes.

3 This course was taught as 1 hour logic and 2 hours sociology.

4 This course was taught as 3 hours philosophy, 2 hours logic and 2 hours sociology.

5 It was taught as 2 hours in the third year.

6 In the science branch of the last year program, sociology was taught as 2 hours and logic was 1 hour.

7 In the literature branch of the last year program, sociology and philosophy were taught as 2 hours each and logic was 1 hour.

8 Credit system was applied in this period. The course of philosophy was the common course and it was divided into two, and was taught as 1 – 2. In this period, the courses of ‘Philosophical Texts’ and ‘History of Philosophy’ were in the elective course which were compulsory to graduate.

9 The course of philosophy is still taught in the 11th classes of high schools as a compulsory course.
taught in the Republican period. In fact, even though the level of the class and weekly hours it was taught changed after 1998, the content, method, the order of the units and other issues changed with the program prepared in 2009.

In order to understand the changes made in the content of a course, one should have a look at the programs prepared for that course. A teaching program is defined as “a program having a role in an educational program, having several categories of knowledge, aiming at making students attain this knowledge and skills in line with the objectives of that educational program in a planned way” (Varış, 1972: 18). In addition, according to Arslanoğlu (2001: 12), a good teaching program should respond the questions of what, why, how much and how to teach.

It is true for the course of philosophy. It is also necessary to have a look the educational programs prepared for the course of philosophy in order to understand the historical development of the course in Turkey. From the declaration of the republic up to the current time, 7 programs have been prepared for the course of philosophy. These teaching programs are as follows:

1924 Program
This program is the first program of the young republic. Due to the fact that it was just one year after the republic had been declared, there was course as Atatürk’s Principles and Revolutions in this program yet. In this program, philosophy courses were included in the high school curriculum and a separate course called ‘İçtimaiyat’ (Sociology) was assigned. As is known in its name, the focal point of this course was mostly sociology rather than philosophy. However, in the program which was in effect for 11 years, a change was made in 1927 and the name of the course was changed into ‘Felsefe ve İçtimaiyat’ (Philosophy and Sociology).

1935 Program
The program in 1935 was prepared more detailed compared to the previous one. Also, there was a separate part of objectives in this program, but there was not an independent part of objectives in the previous program. The issues such as morality, aesthetics, relativism that was not stated in the previous program was included in the curriculum in this c.

The courses of philosophy that were in effects in this program for 22 years till 1957 were given in the name of “Filozofi ve Sosyoloji” (Philosophy and Sociology). According to this program, the philosophy courses taught in the literature branch of the high schools was given as 7 hours a week in a way to contain sociology and logic. As for the science branches of high schools, logic and sociology were taught together as 3 hours a week.

1957 Program
In this program; arranging a separate program for the courses of philosophy group each is regarded as the indication of professionalism in the issue of programming. While carrying out the studies with regard to content, the least study was carried out over philosophy in the group. Even though the courses of logic and sociology were included in the program of the science branch at high schools, the course of philosophy was not. The course of philosophy was taught as 2 hours a week in the third year together with other courses (logic and sociology) at the literature branch of high schools. It is expected that the course of philosophy should have a close relation with literature, since it is thought that the ideal of Turk could only be achieved in this way.

1976 Program
In this program; a separate program was designed for each course in the group in 1976 program. Even though the courses of logic and sociology were included in the program of the science branch at high schools, the course of philosophy was not. The course of philosophy was taught as 2 hours a week in the third year together with other courses (logic and sociology) at the literature branch of high schools. The program was prepared in a didactic way for teachers and what was expected from teacher during the class was given in a detailed way. In addition, the objectives of the course were divided into two as general and special objectives and the subject of objectives were given in detail. The content of the curriculum was enlarged. Compared to the previous ones and which subject would be taught to what extent in the curriculum was introduced as a new application.
As in other programs, there was no recommended teaching – learning method particularly in the program of 1976. However, depending on the content it is likely to say that verbal teaching method is the most significant method.

On the other hand, it was recommended that there must be a specialization at schools where there was more than one teacher of philosophy and each teacher must focus on one of the group courses. It was pointed out that while grading students, it is necessary that the marks should be determined in terms of the credits of the courses not the arithmetic average particularly at science branch.

In 1976 program, it was recommended that students should not memorize the content of the courses and they should not be brainwashed in terms of any ideology with the effect of any “ism”. It was also stated that the subjects in matter should be related to science history and Turkish culture while teaching the subject if necessary. As a new application, 1976 program presented the content with units, which the earlier program did not have.

1985 Program
In this program; as in 1976 program, a separate program was designed for each course in the group in 1985 program, as well. The course of philosophy was taught as 2 hours a week in the third year together with other courses (logic and sociology) at the literature branch of high schools. Students were tried to attain a perception with regard to the historical development of philosophy and sciences, besides its place in Turkish community. The perception of philosophy was examined in Turkey in the period of Ottoman and the Republic. The program was prepared in a didactic way for teachers and what was expected from teacher during the class was given in a detailed way.

In the program of 1985, a separate title of objectives was given in the introduction of the program as well. The program of 1985 has a larger content compared to previous programs. In a close analysis, it is seen that the program looks like a Philosophy-Science history besides a general philosophy culture. In addition, it is an extra advantage that it has scientific developments and philosophic movements at Ottoman and Republican Turkey at the final part.

Dialogues and discussions, writing compositions discussing and examining a subject and also the analysis of philosophic texts were recommended in this program.

1993 Program
In this program; it was applied as 2 hours a week in the final year at high schools. It was prepared in the form of an independent program. It contained a great majority of the subjects regarded within the content of philosophy. The historical process of philosophy was taken under a separate title and the subjects were distributed to teach when necessary.

As a different feature from previous programs, the contents, subtitles and targeted objectives and behaviours were given in detail.

Instead of giving general objectives related to the course, a total sum of 22 objectives suitable for the qualities of the subject were determined in each unit.

The program of 1993 was different from other programs in terms of its content. Besides taking such issues as Political philosophy which was not mentioned in earlier programs before, some units such as “Rome and Science and Philosophy in the Middle Ages”, “The transition of Islamic Science and Philosophy” and “Science and Philosophy at Ottomans” were excluded.

A part of how to teach the course was placed just below the unit in the program. How to teach the program was given in these parts in a detailed way. In these parts, such methods and techniques as discussion, question and answer, verbal teaching, exemplification could be reached about how to teach the subjects.
It had a clear and distinct structure of unit. The contents of the units, the targeted behaviours and objectives, the way of teaching it were given in detail.

2009 Program
The approach of this program based upon constructivism was given as follows:
It regards each individual as a peculiar person. It keeps the respect for individual differences in the forefront. It considers the active learning methods as the basic principle. Depending on the socialization function of education, it courage people to work together to share ideas and ask questions. In line with the basic objectives of national education, it focuses on training individuals protecting and developing national values and adopting universal values. It has efforts to train students as individuals who can thing freely, be aware of responsibilities, and know their rights as people compatible with the environment. It accepts that individuals have responsibilities in democracy as well as having rights. It regards our cultural and artistic values as a tool of developing personality and socialization. It aims at making students question themselves, the world and universe through philosophy.

In addition; the course of philosophy that was taught in 12th class was started to teach in 11th class. The duration of the course did not change and stayed as 2 hours. The course book was colorized and became more attractive. The sizes increased so that more pictures were able to be added in the book. The number of activities and reading texts were increased in the course book.

The role of teacher in teaching changed and was defined as “the guide for student in learning”. The name of the unit “Introduction to Philosophy” was changed as “Getting to Know Philosophy”. The place of the unit “Philosophy of Science” was changed and taken to the end of the book. It was aimed that students should not be those just listening, but the ones contributing to the course.

THE UNITS OF THE PHILOSOPHY OF RELIGION AND RELIGIOUS CONCEPTS IN THE TEACHING PROGRAMS OF PHILOSOPHY COURSE

Traces of Religious Issues in 1924 Teaching Program of Philosophy
The strongest side of this program which began asking questions like ‘What is philosophy?’, ‘Who is philosopher?’ was the field of the Philosophy of Knowledge. In this unit which focused on the problem of ‘The Opportunity of True Information’, a lot of movements such as dogmatism, scepticism, criticism, realism, idealism, pragmatism and materialism were taken place.

Religious concepts and views were given in two places:
The first was the part starting with the title of ‘Considerations over Life’. In this part, such teaching components as mechanism, vitalism and the doctrine about the existence of animal and plant types were given. In addition, there was a separate subdivision with the title of “Creation”. In this division, it was aimed to teach the humanistic views with regard to the creation of beings besides teaching religious ideas.

The second one was the subjects in the part of Psychology. Psychology was not given as an independent course in the program. It is likely to say that many of the issues and titles of this course had a religious content. As an example, some basic Kalam discussions such as “Absolute and Allah, Description of Allah, the Value of the Evidence Put forward to prove the Existence of Being” were discussed. Some teaching doctrines such as Theism, pantheism, Taoism and Theology were given. In addition, the movements and views emerging in 18th and 19th centuries with regard to the roots and functions of religion were discussed.

Traces of Religious Issues in 1935 Teaching Program of Philosophy
This program was a weak program in terms of religious concepts compared to 1924 program. This program that was prepared in the effect of positive sciences, the course of philosophy was defined as a complementary course of literature and the highest objective of it was to make students attain a positive consciousness at youth. It was thought that the youth with a positive consciousness would not have a narrow point of view and they would have larger perspective in terms of social events.
In this program, the unity of 'morality' was taken out of the curriculum. Instead, some tasks were given to teacher to teach the following things in the case of having time after the subjects were taught: moral events, customs and traditions as the objective reflections of moral phenomena, law, the source and change of issues like responsibility; the source and change of conscience and sense of task which is the subjective reflection of moral phenomena.

The subjects of 'metaphysics' were taken out of the program just like the unit of morality. Instead of these subjects, the following was decided to include in the program: the relation between philosophy and scientific view; the effect of philosophic idea on scientific improvement and the effect of scientific view on the philosophic idea; the effect of philosophic view on social life.

The unit of 'the philosophy of religion' was also taken out of the program and the issue of religion was given in the program of sociology. It was asked that teaching students it is possible to have different look at religion from a different perspective. In addition, it was aimed to teach why a national state should be based upon secularism should be taught to students.

Traces of Religious Issues in 1957 Teaching Program of Philosophy
In the program of 1957, the unit of 'morality' was put in the content of the course of philosophy again, which was different from the previous program. The following subjects were aimed to teach in the unit of morality: What is moral freedom and what is the evidence in this issue? Determinism and its evidence as the counter part of freedom. The content of conscience and its difference from consciousness. In addition, the title of 'art and philosophy' was included in this unit with the purpose of informing students briefly over beauty and art.

The issue of religion was weak in this program as well. Religion was regarded as a sociologic phenomenon and was included in the program of the course of sociology. Under the title of 'social events', the only thing was given was information about the religious lives of the nomadic and settled communities. In relation with these subjects, the necessity of the subject of secularism was asked to teach as well.

Traces of Religious Issues in 1976 Teaching Program of Philosophy
The concept of 'religion' was included in the content of the course of philosophy once again despite its narrow content. In the unite with a title 'The relation of Philosophic Knowledge with Other Types of Knowledge' which had a total weight of 10% in the whole program, the relation of philosophy with science, art and religion was given. In other words, the total weight of the subject of 'philosophy-religion relation' in the whole program was about 3%.

Besides that, the views of thinkers like Farabi, Ghazali, Ibn Sina, Sühreverd and Ibn Arabi who were the representatives of Islamic thought were given more place in the program of 1976.

Traces of Religious Issues in 1985 Teaching Program of Philosophy
In the program of 1985, religious issues and concepts were given more compared to previous programs. Religious concepts and issues were given in different parts as follows: In the 'Introduction' unit where the types of knowledge was introduced mostly, the title of 'Religious Knowledge' was taught as a type of knowledge. What the source and features of religion were given as the subtitles of it. In addition, the relation of religion and philosophy was given in the context of the relation of philosophy with various fields in this unit.

Besides that, under the title of 'Science and Philosophy in Islam and Turkish-Islamic World', a large part was assigned with a weight of 20% in the third unit. In the first subtitle of this unit, the rise of science and philosophy in Islamic world was explained and positive approaches of Qur’an, Hadith and Kalam as the effecting components were given. Under the second subtitle, the development of science in Islamic world was given and the views of such Turkish-Islamic thinkers as Harezmi, Ibn Turk, Ibn Sina and Beyruni were also given. In the third sub-unit, the relation between the idealistic movements in Islamic world and philosophy was explained and Sufism was given as a movement of thought; also the ideas of Farabi, Ghazali, Ibn Rushd, Yusuf
Has Hacip and Nizamu’l Mulk who had a profound effect on such kind of idealistic movements in the context of mosques and madrasahs.

In the fourth unit, science and philosophy, translation works and transmission of knowledge to the West in Islamic world was mentioned under the title of ‘The Transferring of Islamic Science and Philosophy to the West and Renaissance’. The total weight of this unit in the whole program was 5%.

In part within the fifth unit was assigned to the issues of ‘Science and Philosophy at Ottoman’ under the title of ‘Science and Philosophy in the New Age’. In the subtitles under this title, the representatives of Sufism such as Maulana, Yunus Emre, Haci Bektaş-ı Veli who lived before Ottoman some other thinker of Ottoman like Hocazade Koci Bey and Katip Çelebi were given.

**Traces of Religious Issues in 1993 Teaching Program of Philosophy**

This unit was prepared taking the forms of a certain problem or issue examined by different fields of philosophy into consideration for the first time. As a result, the issue of ‘religion’ was given a place in a program as a separate unit with all its concepts and discussion topics. In other words, a unit of ‘the Philosophy of Religion’ was assigned as a separate unit in the course of philosophy for the first time.

In the program, it was asked that the concept of ‘secularity’ mentioned in the unit of the Philosophy of Religion should be taught to students in line with the views and applications of Atatürk. There were eight units in the program and the unit of the Philosophy of Religion was the last unit. The total weight of the unit of the Philosophy of Religion was 10% in the program.

This unit was divided into two parts:

*In the first part with a title of ‘The Subject of the Philosophy of Religion’, the issue of ‘A Philosphic Approach to Religion’ was studied in the context of ‘the Difference between Theology and the Religion of Philosophy’ and ‘Philosophic Basis of Religion’. The second subtitle was ‘Basic Concepts of the Philosophy of Religion’. As shown in the title, the concepts of ‘God’, ‘prophet’, ‘wahy (apocalypse)’, ‘faith’ which are the basic concepts of religion was explained in this part. In the third part with a title of ‘Basic Questions of the Philosophy of Religion’ these questions were asked and answered: How was the universe formed? Is wahy possible?, What is the quality of the question of religion?, Does God exist?, Is there a hell or heaven? If there is a punishment, which one will be punished, the body or the soul? Is miracle possible? and so on. The most discussed of these question is ‘Does God exist?’.*

Therefore, the second subdivision had the title of ‘Some Different Approaches Regarding the Existence of God’. This part had three different approaches within itself. The first one was ‘Those Accepting the Existence of God’. Under this title, such teachings as theism, deism, pantheism were aimed to teach. The second one was ‘Those Refusing the Existence of God’, where atheism was mentioned. The third part had the title of ‘Those Claiming that the Existence or Absence of God cannot be Understood’. In this part, the teaching known as agnosticism was mention.

**Traces of Religious Issues in 2009 Teaching Program of Philosophy**

In this program, the unit of the Philosophy of Religion remained the same as in the program of 1993. There were not so many differences in the content of the topics. Besides that, the program of 2009 was prepared depending on the constructivist approach that has been adopted since 2006 in Turkey. Within this perspective, even though there were not so many changes in the subjects, there became significant changes in the methods of teaching them. This change that was felt methodically was started to teach through activities where students could rather construct them on their own.

In this program, there became some formal changes in terms of the unit of the Philosophy of Religion. As an example, this unit that was studied as the last unit in the previous program in terms of teaching it was taught as the sixth unit just before units of Political Philosophy and Philosophy of Science. In addition, the weight of the unit which was 10% in previous program decreased to 7% in this program.
CONCLUSION

Religion and philosophy are two fields that are always discussed by both their members and every level of society. The institutions of politics are mostly a part of these discussions and political effect has always been felt by religion and philosophy as well. Politics has always had a wish to determine philosophical movements and the institution of religion from as many aspects as possible and if it is not possible they want to manage and control them at least. Therefore, any time political government is changed the outlook for philosophy and religion is reshaped depending on the manner and style of the sovereign powers. This case has always kept a problematic which sometimes reach dangerous levels in particular about religion.

This problematic could be observed very clearly in the units of the philosophy of religion and in examining religious concepts by philosophy; since different applications with regard to how to use religious concepts by philosophy in almost every program. Dominant state ideologies in the period when philosophical programs are prepared has always been determinant historically. Therefore, the phenomenon of religion was either perceived as a component that would increase Turkish nationalism depending on the position of the dominant ideology, was sometimes ignored or was classified depending on the improvements in positive sciences.

Upon the evaluation of Teaching Programs of Philosophy under these effects;
In the program of 1924, it is quite important to adopt the concept of ‘creation’ as a topic despite the rise in Darwinist evaluation theorise. In addition, inclusion of such teachings as ‘definition of God’, theism, pantheism, entity, Taoism into the curriculum of psychology is another feature that makes the program interesting.

In 1935, excluding the units of ‘the Philosophy of Religion’, ‘Metaphysics’ and ‘Morality’ out of the teaching program of philosophy could be the indication of the fact that this program was prepared depending on the increasing effect of positivism. The effect of this case did not only result in decreasing the effects of religious concepts in the program, but the course of philosophy was also badly injured with the exclusion of metaphysic topics. In this program, the wish that teacher could teach some issues at the end of the course if he has time does not comply with realities; since the issues in question is so large that you cannot teach them in a very limited time. Another wish to mention about religion within framework of the principle of secularism could be regarded as the fact that the issue has turned into a political issue.

The program of 1957 is a week program in terms of religious concepts. Religion in this program was only taken in a limited way as an issue of sociology with the form of its emergence as a social institution in some communities. The positive side of the program compared to the previous program is that it brought the moral issues that are impossible to think apart from religion back.

The issue of religion was only mentioned as a field having a relation with philosophy in the program of 1976. Even though it had a narrow content, the superior side of the program to two previous programs is that religion was taken in the context of philosophy.

In the program of 1985, the questioning of what the source of religion was and what features it had is an indicator of the fact that the concept of ‘religion’ was regarded as an issue in terms the course of philosophy with its sub-problems and it is a desired case. In addition, the scientific studies in Turkish-Islamic world and the transition of these studies to the west was intensively mentioned in the program. Naturally, religious concepts and issues were frequently given in this sense. In term of the fact that it mentioned about religious concepts and issues, it is likely to say that 1985 teaching program of philosophy is the largest program from the perspective of content.

The importance 1993 program results from the fact that the program contains a separate unit of the Philosophy of Religion for the first time. As it is a separate unit, religious issues were taken in a systematic style and from the perspective of philosophy. Such components as how philosophy considers religious issues which it regards them controversial from its perspective, what these issues are were given in the unit. The fact that
program has a separate unit of the Philosophy of Religion and it has an intensive content in terms of religious concepts and issues make this program quite successful.

The program of 2009 is not so different from the previous program in terms of content. This program is separated from other programs in terms of some formal differences and the methods and techniques of teaching. As well as the unit of the philosophy of religion kept its position as a unit in the program, its weight in the program of general philosophy was decreased up to 3%.

In the light of the philosophy teaching programs investigated, it is likely to say that even though the intensity and practice are changed depending on the conditions of the time, the issue of religion, the units of the Philosophy of Religion based on the concepts are a complementary and indispensable part of the course of philosophy and of the teaching programs of philosophy.

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