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Dear TOJDE Readers,

Welcome to the Volume 17, Number 1 of TOJDE,

There are 7 articles and 2 book reviews in this first issue of the year 2016. These articles are written by 12 authors from 4 different countries. These countries are Canada, Indonesia, Pakistan and Turkey.

The 1st article is titled FROM ACTIVE LURKERS TO COMMUNITY LEADER: WHO THEY ARE AND WHAT THEY DO and written by Dr. Turgay ALAKURT. In this article, Dr. ALAKURT explains community of practice among mathematic teachers. An e-mail based supporting system is used among the teachers. Content analysis and clustering analysis are used to gather the results. The results show that there are five different types of participation defined as community leader, core members, active members, peripheral members and active lurkers. Besides, there is a group who never participate in knowledge sharing and exchange.

DEVELOPING THE 21ST-CENTURY SOCIAL STUDIES SKILLS THROUGH TECHNOLOGY INTEGRATION is the title of the 2nd article. Dr. Mohammad Imam FARISI is the author of this article. Dr. FARISI highlights the educational necessity of technology in the digital era. Depending on this phenomena, this study examines and describes academic evolution toward a commitment and further development in research. Also, it establishes 21st-century skills map for the social studies, and the implications for developing teachers’ competences and teachers’ education curriculum.

The 3rd article is written by Fatma OZUDOGRU and Dr. Murat HISMANOGLU. VIEWS OF FRESHMEN STUDENTS ON FOREIGN LANGUAGE COURSES DELIVERED VIA E-LEARNING is the title of the article. This study is aimed at finding out the views of freshmen students on foreign language courses delivered via e-learning and revealing whether there were any statistically significant differences between students’ views in terms of age, gender, time spent on using e-learning system and the faculty they studied at. Research results showed, there were no significant correlations between students’ views and age and the time spent on using e-learning. On the other hand, statistically significant differences were found between students’ views and gender and the faculty students were studying at.

The 4th article, titled INSTRUCTION DESIGN SYSTEM OF ALLAMA IQBAL OPEN UNIVERSITY: A VEHICLE FOR IMPROVEMENT OR MERE A SALOGON, is written by Muhammad ASHFAQ, Dr. Muhammad Ajmal CHAUDRY and Dr. Muhammad Javed IQBAL. This study aimed to analyze the existing instructional design system of Allama Iqbal Open University. Besides, the study identifies the possibilities of new innovations, explores the gap between existing practices and opportunities of instructional design system and suggests the strategies for improvement in instructional design system at Allama Iqbal Open University.

The 5th article is conducted by Dr. Irem ERDEM AYDIN and Salih GUMUS and titled SENSE OF CLASSROOM COMMUNITY AND TEAM DEVELOPMENT PROCESS IN ONLINE LEARNING. Determining whether there is a relationship between Turkish online learners’ sense of classroom community, perceptions of success in team development process and their preferences of studying in teams covers the purpose of this study. In the end, the authors find out that there is a medium level relationship between online learners’ sense of community and their perceptions of success in team development process.
THE DEVELOPMENT OF VIRTUAL SCHOOLING IN NEWFOUNDLAND AND LABRADOR is the title of the 6th article and this article is written by Nadeem SAQLAIN. The author explains the historical development of distance education in Newfoundland and Labrador in this article. Also, some recommendations are made to improve virtual schooling in the province by the author.

The 7th article’s title is RESEARCHING AND EVALUATING DIGITAL STORYTELLING AS A DISTANCE EDUCATION TOOL IN PHYSICS INSTRUCTION: AN APPLICATION WITH PRE-SERVICE PHYSICS TEACHERS. Nihat KOTLUK and Dr. Serhat KOCAKAYA are the authors of this article. According to the authors, storytelling is the one of approach which is allowed to using technology in educational field. The aim of this study is to define the use of digital storytelling in physics instruction as a distance education tool. The results shows using digital storytelling as distance education tool will be efficacious.

Two books are reviewed in this issue. The title of the 1st book is BUILDING VIRTUAL COMMUNITIES OF PRACTICE FOR DISTANCE EDUCATORS. This book is written by M. Aaron Bond and Barbara B. Lockee. The reviewer is Gokhan Deniz DINCER.

Other book’s title is FLEXIBLE PEDAGOGY AND FLEXIBLE PRACTICE. This book is an editorial book and the editors are Elizabeth Burge, Chère Campbell Gibson and Terry Gibson. This book is reviewed by Hakan KILINC.

I wish a happy new year for all of you. Hope to meet again in the next issue of TOJDE.

Cordially,

Dr. T. Volkan YUZER
Editor-in-Chief
FROM ACTIVE LURKERS TO COMMUNITY LEADER:
WHO THEY ARE AND WHAT THEY DO

Assist. Prof. Dr. Turgay ALAKURT
Faculty of Education
Dumlupinar University, Turkey

ABSTRACT

In this study, an email-based community supporting a community of practice (CoP) of mathematic teachers was investigated. Public messages members send were examined in order to determine what activities that were conducted by the members and what their level of participation is. Data was gathered via a "Media Records Evaluation Form". A content analysis of these messages revealed that the most frequent activity was views/chat, followed by appreciation and knowledge sharing. Findings also indicate that the least activities were apology, administrative and congratulations. In a CoP, membership is a personal matter and members represent different aspects of participation. In this sense, members’ level of participation were determined by using clustering analysis. The results show that there are five different types of participation defined as community leader, core members, active members, peripheral members and active lurkers. However, research findings also point at a sixth group who never participate in knowledge sharing and exchange.

Keywords: knowledge sharing; CoP; community members; level of participation.

INTRODUCTION

In terms of sharing knowledge, technology, being one of the organizational sources of knowledge management, provides ample opportunities for individuals in producing and distributing knowledge (Yu, Lu, and Liu, 2010). Today, new online communication paradigms which satisfy basic human needs, enable interpersonal communication independent of time and place, and which are based on information and communication technologies, have been developed. Online communities constitute one of these communication paradigms (Stanoevska-Slabeva and Schmid, 2001). Seen as social phenomenon at the beginning of the development of internet technology, these communities have come to the fore as a popular concept with the widespread use of technology. As a result, although many groups have different characteristics, they are called communities. Even among online designers and developers, groups that are in interaction under a heading are called community. Preece (2000) indicates that in order for a group to be considered a community, it should be composed of the following components:

1. **People**: They interact with each other socially, because they are eager to play such special roles as leadership, chairmanship, pioneering, and they are eager to cater to their own needs.
2. **Common Goal**: It is an interest, need, information exchange or service that bears a reason for the formation of the community.
3. **Rules:** These are the laws, rules, protocols, rituals, assumptions that are not verbally expressed, and they guide the interaction among people.

4. **Computer systems:** It facilitates and supports social interaction that enhances the sense of solidarity.

**COMMUNITIES OF PRACTICE**

First coined by Lave and Wegner (1991), “Communities of practice are groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, McDermott, and Synder, 2002). Not all communities are communities of practice (Table 1). In order for a community to be considered a community of practice, its members should gather around a common interest (domain), they should be engaged in common activities and discussions that would enhance their ties (community), and they should form a common accumulation of resources (practice).

This does not, however, denote a new idea. According to Wegner (1998), communities of practice are environments where community identity is developed, meaning is constructed, learning is realized, and consensus is reached through mutual interaction. Members interact within a common application. Within *application*, which constitutes an important part of the community, are three dimensions of the relationship. The first one of these is mutual engagement which denotes the pattern and quantity of the interaction among members. Members form new norms as a result of this interaction by shaping group culture and applications. Being a member of a group does not merely mean being a member. Interaction with other members is also required. Secondly, the common purpose of members that ties them together constructs a joint enterprise that denotes securing consistency in actions and a unifying goal. Lastly, such shared and commonly used repertoire as stories, techniques, tools, forms, symbols, mental categories, concepts, short cuts formed by members in time constitute the thirds dimension of interaction.

As a result of this interaction, in the long and short run, members of the community can find solutions to the problems they face, and can develop new solutions related to the problems through anticipation as well as their knowhow, different perspectives and skills. Moreover, by way of forming a common synergy, calculated risks such as trying new methods can be taken. Members coordinate labor over a problem in order to find a solution to it. Communities of practice are not merely communities that deal with problems. They are also communities in which members create sustainable values that correspond with the community’s long-term objectives, real applications within real contexts. In addition, members of the community contribute to their professional growth by means of constructing a database, mutually sharing knowhow, skills, and experience, and following advancements in relation to their fields. In addition to equipping them with short or long term values, communities of practice help their members in providing concrete or abstract gains such as enabling them prepare handbooks, improving skills or accessing information more rapidly. For instance, such less concrete values as improving the sense of trust or increase in the skill of putting forth a new product develop due to the mutual interaction among the community. However, the biggest value that a community of practice provides for its members is composed of abstract outcomes. Friendships
among members, sense of belonging, professional trust, and increased sense of solidarity can be given as examples (Wenger, McDermott and Synder, 2002).

Table 1
Distinctions between communities of practice and other structures

<table>
<thead>
<tr>
<th></th>
<th>What’s the purpose?</th>
<th>Who belongs?</th>
<th>How clear are the boundaries?</th>
<th>What hold them together?</th>
<th>How long do they last?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communities of Practice</strong></td>
<td>To create, expand and exchange knowledge, and to develop individual capabilities</td>
<td>Self-selection based on expertise or passion for a topic</td>
<td>Fuzzy</td>
<td>Passion, commitment, and identification with the group and its expertise</td>
<td>Evolve and end organically (last as long as there is relevance to the topic and interest in learning together)</td>
</tr>
<tr>
<td><strong>Formal Departments</strong></td>
<td>To deliver a product or service</td>
<td>Everyone who reports to the group’s manager</td>
<td>Clear</td>
<td>Job requirements and common goals</td>
<td>Intended to be permanent (but last until the next reorganization)</td>
</tr>
<tr>
<td><strong>Operational Teams</strong></td>
<td>To take care of an ongoing operation or process</td>
<td>Membership assigned by management</td>
<td>Clear</td>
<td>Shared responsibility for the operation</td>
<td>Intended to be ongoing (but last as long as the operation is needed)</td>
</tr>
<tr>
<td><strong>Project Teams</strong></td>
<td>To accomplish a specified task</td>
<td>People who have a direct role in accomplishing the task</td>
<td>Clear</td>
<td>The project’s goals and milestones</td>
<td>Predetermined ending (when the project has been completed)</td>
</tr>
<tr>
<td><strong>Communities of Interest</strong></td>
<td>To be informed</td>
<td>Whoever is interested</td>
<td>Fuzzy</td>
<td>Access to information and sense of like-mindedness</td>
<td>Evolve and end organically</td>
</tr>
<tr>
<td><strong>Informal Networks</strong></td>
<td>To receive and pass on information, to know who is who</td>
<td>Friends and business acquaintances, friends of friends</td>
<td>Undefined</td>
<td>Mutual need and relationships</td>
<td>Never really start or end (exist as long as people keep in touch or remember each other)</td>
</tr>
</tbody>
</table>


In his study where he focuses on the factors influencing the sharing of knowledge among virtual communities of practice, Alakurt (2013), too, indicates that material reasons for joining a community, which denote the concrete opportunity related to people’s professional or private lives (finding solutions to daily problems, benefiting from other members’ experience, being informed about professional advancements, course plans, exam questions, official document samples, etc.), are on the fore. Formed in various different fields from health to education, from e-trade to law, communities of practice bring people together, and they are an important tool and site in which people can find solutions to their social and professional problems (Preece, 2000; Timbrell, Lambe and Taule, 2007). However, differences behind the reasons for members’ participation to the
community affect their participation levels to sharing of knowledge processes, and results in their assuming new roles and behaviours. Even when they are communities where large levels of participation to knowledge sharing processes is present, most of this sharing is done by a small number of members. Some members rarely share, and many members merely read the sharing and do not participate (Preece, Nonnecke, and Andrews, 2004; Zhang and Storck, 2001). In this research, knowledge sharing processes in a community of practice and the members' level of participation to this tried to be determined. Thus, the aim is to make sense of the interaction among members through roles and behavior structures. To this end, this research seeks to answer the following questions:

1. What activities do members engage in during knowledge sharing processes?
2. What are the levels of participation of members?
3. Do the activities members realize differ according to their level of participation?

**METHODOLOGY**

**Study Group**

The study group of this research consists of communities that meet the criteria below:

- They carry the domain, community, and practice characteristics as indicated by Wenger, McDermott, and Snyder (2001).
- They are founded intended for a specific discipline at the national and secondary school level.
- They have more than 1000 members
- They meet at least twice, in meetings that are held face-to-face.

As a result of the Google search, an email-based community (ILKMATZUM) that meets these criteria consists of the study group. This community was founded in 2006 as a sharing, discussion, chat, and news group for mathematics teachers. Only the members can view the content, and anyone can apply for subscription. Between 2006 and 2013, they held three meetings where members meet. Structural features of the community are given in Table 2.

<table>
<thead>
<tr>
<th>Categories*</th>
<th>Demographics</th>
<th></th>
<th>Organizational Context</th>
<th></th>
<th>Membership Characteristics</th>
<th></th>
<th>Technological Environment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Orientation</td>
<td>Life Span</td>
<td>Creation Process</td>
<td>Leadership</td>
<td>Size</td>
<td>Geographic Dispersion</td>
<td>Members’ Selection Process</td>
<td>Members’ Prior Community Experience</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>Level of Maturity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Permanent</td>
<td>Spontaneous</td>
<td>Large (&gt;2500)</td>
<td>High</td>
<td>Open</td>
<td>Extensive</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Old</td>
<td>Continuously Negotiated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 2**

Characteristic of the community

Note: Adapted from Dubé, Bourhis and Jacob, 2006.

The community actively uses social networks (facebook and twitter) and forum fields in their knowledge sharing processes. In today’s world where there are approximately 200
billion emails sent all over the world (http://www.worldometers.info/tr/), such tools have become important parts of knowledge sharing processes because email services are free, because they do not put extra effort on part of the admin, and because one email account is enough to access all group content and other applications.

Public messages members send were examined in order to determine what activities group members are engaged in and what their level of participation is. Data was gathered by using extreme (deviant) case sampling, which is one of the purposive sampling methods within qualitative research tradition. This sampling method that anticipates situations, which are on a singular or limited case but are rich in information, enables one to reach detailed information (Yildirim and Simsek, 2005). One other reason for selecting this sampling method is to prevent misunderstandings and meaning confusions by interpreting the messages sent by members within their own contexts. To this end, a total of 10248 message samples that were sent between 2007 and 2013 were selected, and these samples were selected from the months that have the least and the most message sending frequency (Table 3).

<table>
<thead>
<tr>
<th>Sample (The number of messages)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Archived in the listserv</strong></td>
</tr>
<tr>
<td>Max</td>
</tr>
<tr>
<td>2007</td>
</tr>
<tr>
<td>2008</td>
</tr>
<tr>
<td>2009</td>
</tr>
<tr>
<td>2010</td>
</tr>
<tr>
<td>2011</td>
</tr>
<tr>
<td>2012</td>
</tr>
<tr>
<td>2013</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

*Duplicated and empty messages were omitted.

**Data Gathering Tools**

In order to determine which activities members of the community are engaged in, a "Media Records Evaluation Form" was used. A coding key developed by Hew and Hara (2007) was used in preparing the form. During this preparation process, randomly selected 207 analysis units were sent to two coders. Selected coders are faculty members who are experts in the field of educational sciences and qualitative research. Analysis units sent to coders comprise of 2% of all analysis units. Researcher and the two coders have come together and reached a consensus related to the categories by adding two new categories (View/Chat and Congratulation) to the coding scheme developed by Hew and Hara (2007).

**Table 4**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>View/Chat</td>
<td>Sharing views on current or social issues</td>
<td>&quot;...I have searched this seller but it turns out that he is not really trustworthy...&quot;</td>
</tr>
<tr>
<td>Congratulations</td>
<td>Congratulating special days or situations (birth, marriage, etc.)</td>
<td>&quot;Happy Teachers’ Day&quot;</td>
</tr>
<tr>
<td>Request</td>
<td>Requesting an information, an idea, or participation</td>
<td>&quot;Thank you. God bless you. Do you also have this for geometry? If you do, that would be really appreciated. Kind regards.&quot;</td>
</tr>
</tbody>
</table>
### Appreciation
Thanking for an action, expression praise or admiration

“Thank you professor, this is a study I will profusely make use of.”

### Administrative
It includes admin-related messages as well as messages related to the use of the communication tool.

“If there are any topic links missing, please copy the link of the topic and answer it with a small note so that all sources are gathered under one topic heading …”

### Announcement
Announcing related news (activities, information, etc.)

“There is a vacancy for Math and Science Education Teachers in our private teaching institution in ….”

“I beg your pardon for the mistake.”

### Apology
Apologizing for a mistake, error, or delay

### Clarification
Giving detailed info about a topic that is not related to the field (usually in reply to a question)

“…open the lid, put the test in, scan, and take it back. Then put another one in … (it is) a long haul … prices start from 50 TL. The other is document-feeding style. That is, all inclusive (scanner, printer, fax machine) prices start from 350 TL…

### Sharing Knowledge
Sharing subject matter knowledge related to the field (personal view, suggestion, sources, etc.)

“Here is the original question: there are 5 cards in a bag … When a card is randomly picked from the bag, what is the probability of the decrease in standard deviation for the remaining numbers? Answer: if numbers whose…Thus, these numbers are 1 and 5. The answer is 2/5.

Defined categories were re-coded by two coders who are experts in education and qualitative researches. In determining the reliability between coders, Krippendorff’ alpha was calculated as 0.661, Cohen’s kappa was calculated as 0.659 and Scott-pi was calculated as 0.658.

#### Data Analysis
Messages composing the sample and the info of members who have sent these messages were recorded by the researcher. In order to determine in which activities members engage, data obtained from the system records of the community were analysed by content analysis. In order to determine the level of community participation in knowledge sharing processes, total number of messages sent between 2007 and 2013 were taken as criterion. In this sense, levels of participation were tried to be determined by grouping members by using clustering analysis, which is a multi-variant statistical technique that helps dividing units, whose groups are not definitely known, into similar sub-clusters. In the clustering analysis, furthest neighbour technique was used; in determining the distance between variants, Euclidian distance was used. Moreover, in order to determine whether activities realized among members differ according to their participation levels, chi-square test was used since related variants are categorical. In the analysis of data, SPSS 17.0 for Windows (Release 17.0.0) software was used.

#### FINDINGS

**What Activities do Members Engage in During Knowledge Sharing Processes?**

In order to determine which activities community members engage in, 10248 messages were analysed by content analysis. As a result of this analysis, activities were grouped under 9 categories (Table 5).
When Table 5 is examined, it can be seen that views/chat is the most frequent activity among members (35%). This is followed by appreciation (32.6%), knowledge sharing (20.6%), and request (.2%), respectively. Analysis findings also indicate that the least realized activities are apology (.2%) administrative (.5%), and congratulations (.8%), respectively.

What are the Levels of Participation of Members?
In order to determine members’ level of participation, how many different members the messages in the sample were sent by was investigated. As a result, it was determined that 753 of the messages (25.2%) were sent by different members. When the vertical icicle graphic belonging to the clustering analysis of messages of members were examined, it was seen that there are five different participation types. These participation types can be defined as follows:

Community Leader: An email-based community can be created by a single member. Usually, this founding member who is also considered as the community leader is also the owner and admin of the community. By determining the foundation objective of the community, this person constitutes the most important human resource that enables the formation of a common ground and identity among members. Having a 21-message-average per month and the most frequent sharing in the group, community leaders are naturally core members at the same time. In time, core members may become community leaders. The community examined within the scope of this study has two community leaders. One of them is the founder, and the other is an ex core member who moves to the next level with his/her sharing and activities.

Core Members
After the community leader, they are the most active members in sharing knowledge. Core members (n=7) with a 15-message-per-month average also assume such special roles as leadership or pioneer ship in time. Being key figures for the survival of the community, these members follow the community and participate in sharing on a regular basis. Core members help the community to grow and improve both by their sharings and because of their common passion and expertise, and they also steer discussion within the community. Having the potential to become community leaders in time, these members usually use their real names, and regularly upgrade the info on their profile pages. This helps the growth of a sense of confidence among members.

Active Members
Members whose contribution to knowledge sharing processes is not as high as core members but who frequently send messages constitute this group (n=11). With a 9 message per month average, active members are self-motivated to improve their
common fields of interest and their expertise in these, they are highly willing to help other members. Showing great devotion, they work diligently in the activities of the community; moreover, they contribute to the community by providing new points of view, ideas, and suggestions necessary for its growth and improvement.

Peripheral Members
Those who closely follow knowledge sharing processes in the community and who occasionally send messages comprise this group (n=30). With a less than 4 messages per month average, peripheral members function as a tool for the construction of deep social ties among members of the community.

Active Lurkers: They are the members that constitute the big silent majority in the community (n=703). They do not frequently share in the community, and their group attachment is low; active lurkers are active readers rather than passive members. For them, whatever is shared in the community (class notes, exam samples, presentations, etc.) is more valuable than interacting with other members.

Do the Activities Members Realize Differ according to Their Level of Participation?
Chi-square results showing whether there is a difference in activities according to members’ participation levels or whether it is related to their participation levels are given in Table 6.

<table>
<thead>
<tr>
<th>Types of activity</th>
<th>View/Chat</th>
<th>Appreciation</th>
<th>Sharing knowledge</th>
<th>Request</th>
<th>Clarification</th>
<th>Announcement</th>
<th>Congratulations</th>
<th>Administrative</th>
<th>Apology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Participation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Leader</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>View/Chat</td>
<td>487</td>
<td>13.6</td>
<td>420</td>
<td>11.7</td>
<td>600</td>
<td>16.7</td>
<td>511</td>
<td>14.2</td>
<td>1571</td>
</tr>
<tr>
<td>Appreciation</td>
<td>55</td>
<td>1.6</td>
<td>999</td>
<td>29.9</td>
<td>448</td>
<td>13.4</td>
<td>735</td>
<td>22.0</td>
<td>1100</td>
</tr>
<tr>
<td>Sharing knowledge</td>
<td>81</td>
<td>3.8</td>
<td>206</td>
<td>9.7</td>
<td>305</td>
<td>14.4</td>
<td>278</td>
<td>13.1</td>
<td>1245</td>
</tr>
<tr>
<td>Request</td>
<td>21</td>
<td>3.3</td>
<td>32</td>
<td>7.0</td>
<td>44</td>
<td>7.0</td>
<td>79</td>
<td>12.5</td>
<td>455</td>
</tr>
<tr>
<td>Clarification</td>
<td>50</td>
<td>14.6</td>
<td>64</td>
<td>18.7</td>
<td>43</td>
<td>12.6</td>
<td>45</td>
<td>13.2</td>
<td>140</td>
</tr>
<tr>
<td>Announcement</td>
<td>18</td>
<td>22.2</td>
<td>5</td>
<td>6.2</td>
<td>2</td>
<td>2.5</td>
<td>5</td>
<td>6.2</td>
<td>51</td>
</tr>
<tr>
<td>Congratulations</td>
<td>4</td>
<td>5.2</td>
<td>14</td>
<td>18.2</td>
<td>10</td>
<td>13.0</td>
<td>16</td>
<td>20.8</td>
<td>33</td>
</tr>
<tr>
<td>Administrative</td>
<td>25</td>
<td>45.5</td>
<td>2</td>
<td>3.6</td>
<td>26</td>
<td>47.3</td>
<td>1</td>
<td>1.8</td>
<td>1</td>
</tr>
<tr>
<td>Apology</td>
<td>5</td>
<td>23.8</td>
<td>2</td>
<td>9.5</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>746</td>
<td>7.3</td>
<td>1744</td>
<td>17.0</td>
<td>1478</td>
<td>14.4</td>
<td>1670</td>
<td>16.3</td>
<td>4610</td>
</tr>
</tbody>
</table>

$\chi^2=1616.132$, $sd=32$, $P=.000$

When Table 6 is examined, it can be seen that messages sent by community leaders who constitute the cluster with the least number of members (n=2) constitute 7.3% of the messages forming the sampling, core members’ (n=7) messages constitute 17.0%, active members’ (n=11) messages constitute 14.4%, peripheral members’ (n=30) messages constitute 16.3%, and messages of active lurkers’ (n=703) who make of the largest cluster constitute 45.0% of the sample messages. This difference observed between the members’ participation levels and the activities was found statistically significant [$\chi^2_{(32)}=1616.132$, $p<.05$]. In other words, there is a meaningful relationship between members’ level of participation and the activities they engage in.

DISCUSSION AND CONCLUSION

In this study, I tried to determine in which activities members of a community of practice engage in their knowledge sharing processes and what behavior and roles they exhibit by examining their levels of participation. Research findings indicate that members engage, in order of frequency, in view/chat (35.0%), appreciation (32.6%), and knowledge
sharing (20.6%). Activities members engage in the least are apology (.2%), administrative (.5%), and congratulation (.8%). These findings are partially similar to the findings of Hew and Hara’s (2007) study. Examining knowledge sharing behavior of literacy teachers who are subscribers to an email list, researchers indicate that members engage mostly in knowledge sharing (60.8%) and request (25.7%) activities. In his study where he examined the knowledge sharing behavior of the members of 6 communities of practice, Alakurt (2013) also states that the most frequent activity is knowledge sharing (30.8%) among members. This activity is followed by view/chat (22.7%), request (15.8%), and appreciation (13.4%), respectively.

Research findings also indicate that there are five different participation levels in the community of practice, and these members assume different roles and behaviors’ in these levels of participation. However, research findings also point at a sixth group who never send messages. Some studies state that the ratio of members who never send messages is 90% (Katz, 1998; Mason, 1999). Preece, Nonnecke, and Andrews (2004), on the other hand, argue that the number of members who never send messages differ across communities. For instance, in communities about health this ratio is 45.5% (Nonnecke 2000), and in communities about software, it is 82% (Nonnecke and Preece, 2000). Moreover in communities established within a company that produces office suppliers this ratio is between %83.8 and %51.6 (Takahashi, Fujimoto and Yamasaki, 2003). In this study that examines a community of practice about education, the ratio is around 75%. The development of the “Community” structure of a community of practice is not only mental but also related to the social ties among people. Sharing knowledge requires forming social ties among members (Chen, Chen and Kinshuk, 2009; Suh and Shin, 2010; Gross and Kluge, 2012). In this respect, relations that are based on trust enhance ties among members thereby improving and promoting knowledge sharing processes of communities (Hsu, Ju, Yen and Chang, 2007; Alam, Abdullah, Ishak and Zain, 2009; Lin, Hung and Chen, 2009; Chang and Chuang, 2011). Members who have mutual acquaintances in the community trust each other more (Yuki et al, 2005). In their study in which they examine the behavior of members who send no messages, 3 or less messages in a month, and members who frequently send messages, Ridings, Gefen, and Arinze (2006), too, state that trust levels of those members who send no messages are lower compared to that of other members. In their study where they define those who either send no messages or very rarely as “lurkers,” Nonnecke and Preece (2001) examine why these members do not participate in sharing processes. As a result of their study, they have found out that the most important reasons for lurkers’ not sending any messages were listed as “wanted to be anonymous”, “work related constraints, e.g., employer did want work email address to be used”, “had too many or too few messages to deal with”, “received poor quality messages”, “were shy about public posting” and “had limited time”. In a similar study, it was determined that the following reasons came to the fore: “just reading/surfing is enough”, “Still learning about the group”, “Shy about posting” and “Nothing to offer” (Nonnecke, Preece, Andrews, and Voutor, 2004).

Communities of practice play a significant role in providing a flow of information. They can be seen as alternative or new ways especially in the realization of new learning, and transferring knowledge to less experienced and less-expert members by experienced and expert members. Active members, core members, and community leader, who comprise of a small group in the community, contribute greatly to the knowledge sharing processes for the survival of the community. Nevertheless, it cannot be claimed that active lurkers, who make up of the group with the most number of members, contribute much to knowledge sharing processes individually. Preece, Nonnecke, and Andrews (2004) suggest several strategies to increase their participation and integration to the community.

• Encouragement of the admins (sending PMs, introducing the new members to the group, or having them to introduce themselves to the community)
• Ensuring new members get acquainted with the community by providing guidance and counselling.
• Rewarding members who contribute to the community.
• Certain members (preferably from core or active members) becoming role models. This also helps increase content-wise quality messages.
• Making the site more user-friendly by dealing with the confusion and disorganization in the interface design (Forming clear directions about access to the interface, reading messages, sending new messages, and starting discussions, etc.)
• Surfing without getting lost among the many messages sent to the community. To this end, content maps can be prepared or the community can be divided into small units (e.g., members who know each other better can form a sub-group)
• Admins never leaving any message (especially those sent by active lurkers) unanswered in order to remedy the weak interaction among members, or admins delegating this job to other members (core, active, or peripheral members).

Some of the above-mentioned strategies were observed to be applied in the examined community of practice. For instance, most of the community leaders, core members, and active members share their personal info (real name, school they work at, business or personal telephone numbers) on their profile pages or messages. In addition to strengthening ties or trust and enabling members to get to know each other better, this proves to be setting good role models for new members and members who send very little messages. Moreover, it can be seen that there is a high level of appreciation activity (32.6%) among members. It’s been thought that thanking other members for sharing, expressing praise and gratitude has an influence for the strengthening of this tie. In the selection of the community that constitutes the study group; face-to-face interaction among members was a criterion. In this respect, it can be claimed that meeting face to face enhances the sense of trust and results in members getting better acquainted with each other. Lastly, as Preece, Nonnecke, and Andrews (2004) point out, it was observed that the community is divided into a small sub-group called “special group” which is composed mostly of core and active members. Self-motivated members (especially peripheral members) participate more in sharing processes in order to receive an invitation to this “special group.”

Although individually active lurkers participate minimally to the community, when considered as a whole, they provide more to the knowledge sharing processes of the community compared to other groups. This finding is similar to the findings of Zhang ad Storck’s study (2001) in which they examine the members’ behaviors of a travel forum site. This draws attention to the potential contribution active lurkers who tend to leave the community earlier. Maybe, a community’s transition to an upper level depends on what roles its members play in the community. Active lurkers and those who never send messages share either too little or no information about themselves. Qualitative and quantitative research that seeks answers to such questions as how can these members assume more participatory roles, what motivates them, and how can their sense of trust to other members be improved can help improving knowledge sharing processes.

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DEVELOPING THE 21ST-CENTURY SOCIAL STUDIES SKILLS THROUGH TECHNOLOGY INTEGRATION

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ABSTRACT

Recently, technology has become an educational necessity in global-digital era. Facing these phenomena, social studies (SS) should make innovations related to changes of 21st-century skills and learning paradigm, which is characterized by the principles of disclosure of information, computing, automation, and communication. Technology integration into SS learning is one of the learning innovations in the global-digital era, and powerfully supports the National Council for Social Studies (NCSS) as stated in their visions: meaningful, powerful, value-based, challenging, and active. It also strongly supports the development of three core skills of the 21st-century, including learning and innovation skills; information, media and technology skills; life and career skills that developed in partnership with the Partnership Forum for 21st-Century Skills (P21). This paper examines and describes academics evolution toward a commitment and further developments in research; 21st-century skills map for the SS; and the implications for developing teachers’ competences and teachers’ education curriculum.

Keywords: Technology integration, social studies, 21st-century skills.

INTRODUCTION

Technology developments, especially information and communication technology (ICT) and openness in its utilization are two important phenomena predicted will be the main characteristics and have implications for changing 21st century learning paradigm. It has also provided a social and human infrastructure for teachers and students to improve collaboration, interaction, and participation in their learning activities, and support them to create constructive learning environments (Chen, 2011). This is because it has advantages than a traditional learning mode in terms of: flexibility in the time and place; the coverage; computer requirements and operating systems; velocity in obtaining the necessary learning resources an in development; easily, equity, sustainability, and accessibility in updating content and archiving capabilities; effectiveness, efficiency in cost or funding; interactivity in learning process; user-familiarity in the use. So that, technology placed as the most creative and innovative work of 21st-century, and becomes a central issue and theme in many innovations and new vision of education, including Social Studies (SS) (Kerka, 1997; Tinio, 2007).

To maximize the impact of the role of technology in the 21st-century skills development, the Partnership Forum for 21st-Century Skills (P21) confirms, "today no organization can achieve results without incorporating technology into every aspect of its everyday practices. It’s time
for schools to maximize the impact of technology as well” (P21, 2008c:2). This paper examines and describes academics evolution toward a commitment and further developments in research; 21st-century skills map for the SS; and the implications for teachers’ competences and teachers’ education curriculum.

**ACADEMIC’S EVOLUTION TOWARDS A COMMITMENT**

The initial ideas to explore the theoretical foundations of the use of technology in the SS have been emerged in the 1970s. Martorella is expert who most concerns on this matter. In his edited first book, "Interactive Technologies on the Social Studies: Emerging Issues and Applications" (1977), Martorella provides some original analysis of experts on how to expand and evolve the role of technology that can be used to enrich and enliven the SS curriculum and instruction for the 21st century. In 1997, he reiterated on the significance of technology in SS and attracts experts to discuss this issue further, when he wrote an influential metaphor in a brief article entitled "Technology and the Social Studies—or: Which Way to the Sleeping Giant?"

"Arguably, technology is a sleeping giant in the social studies curriculum,...how little the social studies curriculum has been affected by the technology changes sweeping the nation...Technology and the SS have the power to become a dynamic and forceful agent for changing the SS curriculum“ (p. 511).

He also gives an outline how technology should be included in the K-12 social studies curriculum through five themes: “computer as alter ego, computer as citizenship educator, computer as workplace, computer as school, and computer as the data gatherer” (p. 513). In listing these themes, he besides portrays technology as both the content and conduit for SS learning, and emphasizes on the SS as democratic education. According to Manfra (2014), Since then, it has been cited by numerous SS researchers, because for them, it appeared as the social impact of the Internet was just beginning to be understood; and his metaphor of the sleeping giant “depicted what he saw as a widespread reluctance to leverage technology for educational change in social studies education” (p. 2).

Martorella’s metaphor about “the sleeping giant” seems not fully impact on the creation of a change in the SS practice. As Doolittle and Hicks (2003) wryly note, “The sleeping giant has been having quite a long nap” (p. 74). At least until the end of the 20th century, it is still controversies among experts. On one side, experts believe it is a paradoxical force for democracy if the use not provide students with experiences for the study of the ideals, principles, and practices in a democratic republic; and is not be addressed in the continuum for developing meanings of conformity, information, reason, and self (Diem, 1983; Ehman & Glen, 1991); and will be a dangerous, destructive or uncontrollable force (Manfra, 2014). On the other side, they believe it provides a number unmatched, unlimited sources and repository of ideas for learners and teachers, and becomes an essential element of the repertoire of learning tools to engage learners in the SS curricular, which cannot be provided in a traditional curriculum (Braun & Risinger, 1999). It can also to create new places of assembly that will generate of meaningful opportunities for people’s participation in political and democratic processes (Smith & Kollock. 1999); to educate, promote democracy, and save lives (Gore, 1994).

However, since that time, need for integrating technology into learning SS has become a major interest in the world community of SS. Even, some experts (Fairey, Lee, & Bennett, 2000; Doolittle & Hicks, 2003; Ayas, 2006; Acikalin & Duru, 2005) have also widely used the Martorella’s metaphor as the "touchstone" in a number of academic discussions to find the
pedagogical foundations, conceptual models, and empirical supports for integrating technology into SS learning.

A professional commitment for integrating technology into SS occurred in 2006, when NCSS—the US community of social studies and one of the world’s center of excellence in developing SS—agreed for integrating technology into SS. It is preceded by a Whitworth and Berson’s (2003) research on the NCSS’s publication on the results of an intensive study of technology infusion into the SS in period 1996-2001. Their studies conclude that technology integration into the SS has a strong influence for the students’ daily life and for the SS learning. As stated by NCSS in the document of "A Position Statement of the National Council for the Social Studies" (2006, 2013), they suggest that civil-society lives are supported by “technology-driven” and “technologically-oriented civic society” have a major influence on learners’ beliefs, knowledge, daily life; social and cultural changes; and on the ways of people interact with the world. Social studies’ integrative nature, its exploration of the human experience across time and place, and its commitment to readying youth for life in a democratic society within a global context means the field is well suited to enabling youth to learn with and about technology for several reasons: (1) the democratization of knowledge; (2) the impact of technology in all areas of life; (3) the creation of multiple blended and online settings within a global context; (4) needs nurturing of students’ rich array of digital democratic experiences; (5) and a rich tradition of innovative use of technology in the teaching and learning of social studies.

In a document “A Vision of Powerful Teaching and Learning in the SS: Building Social Understanding and Civic Efficacy,” NCSS (2008) reiterating that the SS would be "powerful" if the students can (1) acquire “meaningful” skills through the use of the 21st-century technology wisely, which help them to grow and thrive in the world evolving constantly and changing rapidly; and (2) gain an “integrative” SS subject matter using technology effectively (p. 511).

The NCSS’ commitments are an evidence that “the giant is indeed waking” (Bolick, 2004:130); It might be “a Trojan horse of school reform” (Bolick, 2008:186); it become "the agentic power" which can revitalize the traditional concepts as citizenship education (Mason, Berson, Diem, Hicks, Lee, & Dralle, 2000); and provide the tools, means, and opportunities for students to practice freedom of speech, to protect their rights, to facilitate their actions as part of the meaning of democracy, to participate as citizens in the global community, and to become agents for social change (Waring, 2006). Even, in 2012 or 15 years after Martorella states ‘sleeping giant metaphor’, it becomes a year of special themed issues discussed in a symposium of The College and University Faculty Assembly of the National Council for the Social Studies Anniversary, which have published in the journal of Contemporary Issues in Technology and Teacher Education, volume 14, issue 1, 2014 (ie. Manfra, 2014; Friedman, 2014; Hofer & Swan, 2014; Hartnett, George, & Dron, 2014; Kang, 2014).

Technology integration into the SS has to become a shared commitment within the worldwide community of SS, and become the touchstone in a number of research based on various theoretical perspective and methodologies with results that indicate the significance to create learning processes and environments more enjoyable, accessible, meaningful, and authentic that are impossible in the traditional classroom (Alexiou-Ray, Wilson, Wright, & Peirano, 2003; Hollenbeck, J. & Hollenbeck, D., 2009); and to empower students successful in gaining 21st-century skills within core subjects of SS (e.g. Cogan & Grossman, 2000; Whitworth & Berson, 2003; Ackalam & Duru, 2005; Tally & Goldenberg, 2005; Swan & Hicks, 2007; VanFossen & Berson, 2008; Berson & vanFossen, 2008; Crawford & Kirby, 2008; Zimmerman, 2010).
Recently, integrating technology is connecting to democracy development. Experts call it a "digital democracy for democratizing force" (Montgomery, 2008); "a positive force for democratization" (Best & Wade, 2009); a "communicating democracy and democratizing communication" (Elmas & Kurban, 2011), or a "digital democracy or citizenship," a "digital citizenship" (Simsek, E., & Simsek, A., 2013). It is a form of online participatory activity media that can give youth civic and political engagement a much-needed boost and vitally important (Kahne, Ullman, & Middaugh 2012); and a part of the redefining and broadening of existing boundaries of practice and our understanding of what citizenship learning means" (Ito et al. 2008, viii). It has also provided a new paradigm of democracy and citizenship education reflects a style of civic participation ‘more self-actualizing (AC)’ so that participation makes a difference, than traditional paradigms of “dutiful citizenship (DC)” oriented to government through parties and voting (Bennett 2008; Freelon, Wells, Bennett 2013).

THE SOCIAL STUDIES 21ST-CENTURY SKILLS MAP

To maximize the impact of a pivotal role of technology for gaining the SS 21st-century skills, in 2008, NCSS in partnership with the P21 advocates to be integrated into K-12 education. The partnership has created “the 21st-Century Social Studies Skills Maps” that illustrate the intersection between 21st-century skills and the ‘core academic subjects’ of the SS, including Social Studies, English, Mathematics, Science, and Geography. Through this map, students can advance their learning outcomes in the new global economy. This map is derived from a collective P21 vision on the "21st-Century Skills Map" that developed from the result of hundreds of hours of research, development and feedback from educators and business leaders across the nation. The following is the SS 21st-century skills map contains four essential outcome's elements that integrated into core subjects of SS and can be achieved by students in learning (P21, 2008a:1-18).

![Figure 1. An Example from the SS 21st-Century Skills Maps (P21, 2008a)](image)
(1) **21st-century skills** are the essential SS 21st-century skills which should be diffused into educational system, including: 1) “learning and innovation skills” (critical thinking and problem solving, creativity and innovation, communication, and collaboration); 2) “information, media and technology skills” (information literacy, media literacy, and ICT literacy); and 3) “life and career skills” (flexibility and adaptability, initiative and self-direction, social and cross-cultural skills, productivity and accountability, and leadership and responsibility);

(2) **Skill definitions** are operational definitions of each essential SS 21st-century skill as the results of learning, e.g. utilizing time efficiently and managing workload; demonstrating the ability to work effectively with diverse teams; or understand how media messages are constructed, for what purposes and using which tools, characteristics and conventions;

(3) **Interdisciplinary themes** are academic contents of highly-level thinking and integrated by weaving into core subjects of SS such as global awareness, financial, economic, business and entrepreneurial literacy, civic literacy, health literacy, and environmental literacy; and

(4) **Sample student outcome/examples** are concrete sample of teaching and learning activities and outcomes that are fully interconnected into the SS essential skills, themes and core academic subjects of SS.

The skills map can be used by teachers as a framework and concrete examples of the integration of 21st-century skills in designing and developing the SS learning that integrated with technology so that students can advance their learning comprehensively, appropriately; and can support those to understand: (1) what they need to be learned / gained comprehensively core academic subjects and the 21st-century skills and themes in the SS learning; (2) how they learn supported by innovative learning climate, active-participatory, relevant, rigorous, and student-centered (P21, 2008c; 2008d).

In this context, the P21 also stresses, "It's time for schools to maximize the impact of technology as well" (P21, 2008b:2) to create an innovative learning climate, and a synergistic and integrated learning system to maximize the impact of the role of technology. This will students enable to:

1. create learning practices, human support and physical environments to support the 21st-century skills achievement;
2. support professional learning communities that enable teachers to collaborate, share best-practice experiences, and integrate 21st-century skills into classroom practice;
3. allow students to learn in accordance with the real-world 21st-century contexts (e.g., through project-based learning or the like);
4. allow the fairness access to learning tools, technology, and quality sources;
5. provide an architectural and interior design of the 21st-century for learning groups, teams, and individuals; and
6. support for building the wider community and international engagement in online and face-to-face learning (P21, 2008b).

To support of acquiring the skills, the collaboration has also equipped with supporting structures contain the items are suggested as an integrating tool(s) including the technological tools, hardware/software is support teachers and students to search, access, interact, collaborate, promote or publish their ideas, products or resources; and develop their ongoing skills in the use of technology professionally (P21, 2008a).
SOME IMPLICATIONS AND RECOMMENDATIONS

As stated above, the use of technology will give a great impact on gaining the SS 21st-century skills in the future. However, because of the relationship between SS disciplines and technology is precarious and simultaneously contains potential advantages and critiques to its limitations in learning practice such as: (1) education, teacher training, and sources—software and funds—have not been adequate; (2) teachers’ awareness and self-confidence are limited; (4) content coverage is limited; and (5) time for preparation is longer (Beaudin & Grigg, 2001; Butler & Sellborn, 2002; Whitworth & Berson, 2003; Wright & Wilson, 2005). These factors, specially teacher and their education are part of support systems have important roles and responsibilities about how they can integrate technology into SS learning and create conducive learning environments; and how teacher education institutions prepare and develop their professionalism (Figure 2).

Figure 2. 21st-Century Student Outcomes and Support Systems (P21, 2008a)

Teachers’ Competences
Teachers who will use technology selectively in learning SS and in developing the 21st-century skills must be based on the vision and goals of SS: meaningful, powerful, value-based, challenging, and active; and need to act as a "multimedia creator" so that able to create their own multi-media teaching materials (Rose & Fernlund, 1997; Shiveley & VanFossen, 2009). Even, Parr & Ward (2011) strongly suggest teachers to have a "personal laptop" as "activity centers" for him/her to use a variety of digital technologies. It is important related to the technological issue as "ubiquitous computing" and its implications for learning, which has become the subject of discussion at a meeting the number of teachers’ education associations, and educational technology collaborated in the National Technology Leadership Retreat (NTLR) in 2002. The meeting concludes that ubiquitous computing will be a constructive and disruptive force in school for the future, and teachers should be taken their roles and responsibilities to anticipate of them (Bull & Garofalo, 2006; vanHover, Berson, Bolick, & Swan, 2006).

However, in relation to this issue, NCSS (2006) suggests, “We need to capitalize on many students' ubiquitous, yet social, use of such technology and demonstrate the technology's power as a tool for learning” (NCSS, 2006:3). Teacher should also enable to explore important issues and problems of the 21st-century in the Web such as multicultural education; academic freedom; democracy; nuclear controversy; globalization; war, peace, hope; and HIV-AIDS hazard (Singer, 2002).
Corresponding to the types of the technology device, a number research recommends teachers to use two types of technological devices are suitable to develop the SS 21st-century skills and support the creation of constructivist learning class:

(1) “generalist technologies” are composed of software that is more ubiquitous within the public domain, and generally speaking, although they can be used to enhance SS instruction, they could just as likely be used for non-instructional activities. They are relatively more ubiquitous, does not require a special skill to use, and commonly used in situations or non-instructional activities. This type, including email, WebCT/Blackboard, web-based discussion tools (Friedman, Bolick, Berson, & Porfeli, 2009); SMART Boards, clickers, on-line learning resources based on Web sites, Web Quests (Milson & Downey, 2001; Lee & Molebash, 2004a, 2004b; Oigara, 2009); Video iPods (Lennix, 2008); You Tube (Owens & Fralinger, 2009); Wikis, digital documentation, technology-based geographic information system, and a collection of structured sources (Manfra & Hammond, 2005);

(2) “specialist technologies” are composed of software that was not explicitly created in the SS environment, but have distinct applications for teaching and learning SS. They have unique characteristic, require a specific skill to use, and specially developed for learning purpose. This type is such as videoconferencing, webpages for learning, lesson plans using spreadsheets / databases, digital media, presentation hardware, software and games (Friedman et al., 2009); on-line discussion forums (Niu & Aalst, 2009); and online games (Ray & Coulter, 2010).

However, anything devices are used, the most important to be aware of the SS teachers is that design a good and right program, model or strategies deemed capable to improve the learning quality. Some experts (Lee & Molebash, 2004a; 2004b; Salpeter, 2005; Dogan & Robin, 2008; Langran & Alibrandi, 2008; Lowenthal, 2009) recommend some learning strategies or models in using technology, such as: scaffolding strategy focused on the use of online digital resources such as cross-cultural digital storytelling, or digital documentation of the student’s creation. In addition, Mason et al. (2000) suggest pedagogical principles teachers need in integrating technology into learning SS: (1) expand student learning goes beyond what can they be done without the support of technologies; (2) introduce students on the context of its use; (3) provide opportunities for students to learn the relationship between science, technology, and society; (4) encourage the development of students’ skills, knowledge, and participation as a good citizen in a democratic society; and (5) facilitate the students to contribute actively in research and evaluation of the technology—SS relationship. Besides that, teachers also must provide clear guidelines and parameters related to the ways of determining the accuracy of the information, detection bias, the validity of the claims, etc. This is very important as a filter to ensure students that the information obtained really good quality and accurate (Rose & Fernlund, 1997; Bisland & Fraboni, 2007). Teachers should also anticipate student’s anxiety phenomena wisely by encouraging them to remain actively involved in the discussions, partnerships, and collaboration electronically (Riley & Stern, 2004). Various on-line social, ethical, and legal behaviors, as part of the process of safeguarding children’s on-line experiences related to the issue of personal rights in the digital age is also the fundamental aspects that need to be delivered to students (Berson & Berson, 2006:144).
Teachers’ Education Curriculum

Associated with improving the teachers’ competences in integrating technology into the SS learning, the roles of teacher education curriculum are crucial so that the SS 21st-century skills can be realized. The curriculum development needs to change drastically to comply with the competences needed for the 21st century in order to make room for 21st century competences. Essentially, the curriculum should synthesize studies on technology, philosophy, and pedagogy (Soon & Chee, 2012; Beaudin & Grigg, 2001). The synthesis is very important so that teachers be ready with the knowledge, skills, and experiences in integrating technology into learning; be skillful in cultivate a greater understanding of the emergence of stereotypes and prejudice during learning process; and be skillful in improve global literacy and cross-cultural awareness of the students (Carano, 2009). The synthesis curricular activities are also expected to train teacher candidates to find creative ideas to overcome obstacles or limitations in integrating technology into the classroom (Wright & Wilson, 2005; Lambert, 2004). Following are models/approaches can be used to develop teachers’ education curriculum, which is based on the principles of pedagogy, technology, and philosophy.

First, Technological Pedagogical Content Knowledge (TPCK) model is developed by Mishra and Koehler (2006). This model can be used as a starting point to find a "conceptual home" of the technology in the SS which able to build on the concepts of pedagogical knowledge as well as to facilitate the teacher's role as a "curriculum gatekeeper," and as a framework for teachers to discuss the intentions, actions, and outcomes in the context of technology-rich classroom, and is also suitable and applicable to the fields of study of SS. Theoretically, it emphasizes the interrelationship of three principal components of the learning environment: the content, pedagogy, and technology (Thornton, 2001; Keeler, 2008; AACT, 2008).

Second, synthesis curriculum approaches proposed by Voogt and Roblin (2012: 310) which are emphasize integrating 21st century competences into the curriculum. Three approaches/models of the competences' synthesis as follows: (1) be added to the already existing curriculum as new subjects or as new content within traditional subjects; (2) be integrated as cross-curricular competences that both underpin school subjects and place emphasis on the acquisition of wider key competences, or (2) be part of a new curriculum in which the traditional structure of school subjects is transformed and schools are regarded as learning organizations. According to them, although different three approaches are acknowledged, most frameworks recommend integrating 21st century competences across the curriculum due to its complex and cross-disciplinary nature.

Third, Science, Technology, and Society (STS) model are proposed by Rubba (1991), and Aikenhead (1992, 2003; 2005). This model is the most popular model of technology integration. According to them, it represents a typology of Kuhn’s paradigm shift in terms of objectives, and learning process orientation (student-centered) as reflected into the four curricular components, namely: functions, contents, integrated structure, and sequences, that illustrate the successful integration of various disciplines such as anthropology, history, political science, sociology, science, and technology. This model recommended by NCSS to be used in developing SS curriculum. As stated by NCSS in a document of “Standard Curriculum for Social Studies” (2010), “Social Studies programs should include experiences provide for the study of relationships between science, technology, and society” (STS), so the students understand how science and technology associated with the study of history, geography, economics, civics and government (p. 3).

Finally, more importantly is the curriculum needs to teach 21st-century skills discretely in the context of core subjects and 21st-century interdisciplinary themes; focus on providing opportunities for applying 21st-century skills across content areas and for a competency-based approach to learning; enable innovative learning methods that integrate the use of
supportive technologies, inquiry- and problem-based approaches and higher-order thinking skills; and to encourage the integration of community resources beyond school walls (P21, 2008e:8). The curriculum also needs to focus on the development of cooperative behavior, critical-thinking skills, global perspective; to increase the use of technology in learning, critical to media and mass communication; to develop a cross-cultural understanding and tolerance, and respect for human rights (Karsten, Cogan, Grossman, Liu, & Pitiyanuwat, 2002).

CONCLUSIONS

Integrating technology in SS learning is an important innovation of educational paradigm for developing 21st-century SS skills. It has solid philosophical and pedagogical foundations in the theory of constructivism. It has also become an academic and professional commitment among the world community of SS, because it deemed capable as a vehicle for achieving the NCSS’ visions: meaningful, powerful, value-based, challenging, and active. Various studies are also provide empirical supports for developing 21st-century skills through technology integration.

However, some implications for further implementations in the classroom, a number of technical constraints, competences, and infrastructure supports should be attention of the teacher. They need to have sufficient knowledge, attitudes, and skills for the use effectively. Teachers’ competencies and education curriculum are also expected to provide a stock of knowledge, attitudes, and skills of technology by designing an adequate curriculum based on the principles of pedagogy, technology, and philosophy integratively.

Finally, future research is needed to explore how the elements are the critical systems such as standards, assessments and professional communities’ partnership provide tools and resources that help facilitate and drive it, and must be aligned to produce a support system that produces 21st SS outcomes for today’s students. Research on technological devices and integrating models that compatible to K-12 for gaining skills needed are also important, because the 21st SS skills map for them are different in terms of contents, levels, and activities of skill are developed. Bridging gaps in access to benefits of technology especially for the Asia-African students who are socioeconomically disadvantaged are also a challenging study for future. Moreover, the current studies that provided are very limited.

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VIEWS OF FRESHMEN STUDENTS ON FOREIGN LANGUAGE COURSES DELIVERED VIA E-LEARNING

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ABSTRACT

With the increasing number of foreign language courses via e-learning in higher education institutions, it is important to investigate whether the quality of e-learning is up to the standard. This study aimed at finding out the views of freshmen students on foreign language courses delivered via e-learning and revealing whether there were any statistically significant differences between students’ views in terms of age, gender, time spent on using e-learning system and the faculty they studied at. This research was designed using the survey model. The sample of the research consisted of 478 freshmen students who were studying at four faculties and one vocational college in a state university in Turkey. The research data were collected through a scale, proposing a six-dimensional assessment of e-learning systems, which was developed by Ozkan and Koseler (2009) and tested for its reliability by the researchers. Data were analyzed using frequencies, mean, standard deviation, independent samples t-test and one-way Anova. The results indicated that the students’ views on foreign language courses delivered via e-learning were negative with an ‘overall’ part mean score of 2,14 (Std=1,17). Also, the students disagreed ‘learners’ perspective’ dimension (x̄=2,24) and partially agreed ‘instructor attitudes’, ‘system quality’, ‘information content quality’, ‘service quality’ and ‘supportive issues’ dimensions. Furthermore, it was revealed that there were no significant correlations between students’ views and age and the time spent on using e-learning. However, statistically significant differences were found between students’ views and gender and the faculty students were studying at (p<0.05). The e-learning system should be developed in order for students to have valuable e-learning experiences and benefit from e-learning more.

Keywords: E-learning, freshmen student, online courses, language learning

INTRODUCTION

In recent years, with the development of information and computer technologies and widespread use of the Internet, using these technologies in education has become a core and critical issue in education. In line with the technological advance, the use of technological resources in education has played an important role and adopting e-learning systems in courses has gradually become more and more important (Calli, Balcikanli, Calli, Cebeci &Seymen, 2013; Sun, Tsai, Finger, Chen &Yeh, 2008). E-learning is available including high school, universities and post-graduate schools and in different courses.

E-learning has also gradually become an essential part of university education in Turkey (Selman, 2013; Simsek, 2010). There is a trend among higher education institutions to
offer more and more e-learning in foreign language courses (Trajanovic, Domazet & Misic-Ilic, 2007; Zamorshchikova, Egorova & Popova, 2011). One of the reasons for this is increase in student numbers and insufficient infrastructure of some universities (Cakir & Yurtsever, 2012). The quality of education in crowded classes decreases. Therefore, e-learning may represent a viable alternative or a support mechanism for Turkish universities wishing to compensate for the possible ineffectiveness in the teaching due to the high number of students in the classroom. Apart from student numbers, e-learning in foreign language teaching is also popular for a variety of reasons. Firstly, e-learning makes lifelong learning possible (Clements, 2010; Selman, 2013). To keep up with the changing nature of information, e-learning can be used to update knowledge and skills. In addition, e-learning is more likely a student-centered education and lets students take responsibility for their own learning (Antoine, 2011; Selman, 2013). Students should put more effort to learn on their own and have learner autonomy and self-regulated learning skills in e-learning (Can, 2012). Also, they should be self-motivated in e-learning so as to keep learning continuously (Rowe & Rafferty, 2013). Furthermore, e-learning allows students to learn at their own pace (Grosu & David, 2013) because the content of a course can be adapted or reshaped to meet different learners’ needs in e-learning. What is more, students are able to attend synchronous and asynchronous courses, which is different from a traditional classroom. In a traditional learning environment, learning takes place on a weekly basis when students meet the instructor, whereas in e-learning courses, learning can take place whenever students want to learn both synchronously and asynchronously due to the flexibility of e-learning in terms of time and place and readily available course materials at any time. Moreover, Antoine (2011) states that e-learning allows students to interact with the instructor effectively via chats and forums and other interactive tools.

While e-learning has the above-mentioned advantages, it has also some weak points. Selman (2013) lists five disadvantages of e-learning as self-motivated students, expenditure, technology dependence, soft-copied materials and lack of face-to-face interaction. Firstly, students need self-discipline and high level of motivation in e-learning. Furthermore, the cost of e-learning may be high depending on the technology used. In addition, technology dependence may be another disadvantage because students and teachers’ technology usage ability may not be sufficient or they may have weak Internet access. Also, the quality of the content may decrease while converting the content to digital form. Lastly, lack of face-to-face interaction is seen as the major challenge for e-learning (Clements, 2010; Dajani, 2009; Gamble, 2009). Apart from these, Rashid & Rashid (2012) list the following disadvantages of e-learning:

- Maintenance of academic standards,
- Financial problems,
- Organizational problems,
- Postal services,
- Communication,
- Printing and publication of study material,
- Students’ assignments related problems and
- Misuse of technology.

The success of e-learning depends on learner satisfaction as well as self-efficacy and usefulness (Womble, 2008). A number of factors have been reported to be the critical factors affecting learners’ perceived satisfaction in e-learning such as learner computer anxiety, instructor attitude toward e-learning, e-learning course flexibility, e-learning course quality, perceived usefulness, perceived ease of use, and diversity in assessments (Sun et al., 2008).

Moreover, Alley and Jansak (2001, p.6-17) have determined 10 keys for quality online learning. It is suggested that online courses will be high quality when they are student-centered and when:
knowledge is constructed, not transmitted.
students can take full responsibility for their own learning.
students are motivated to want to learn.
the course provides “mental white space” for reflection.
learning activities appropriately match student learning styles.
experiential, active learning augments the web site learning environment,
isolatory and interpersonal learning activities are interspersed.
inaccurate prior learning is identified and corrected.
"spiral learning“ provides for revisiting and expanding prior lessons,
the master teacher is able to guide the overall learning process (as cited in Yang&Cornelious, 2005, p.8).

Besides, teacher qualities are important for quality online language learning. The following skills are what a foreign language teacher conducting e-learning should possess (Gajek, 2004 as cited in Kilickaya, Krajka & Latoch-Zielinska, 2014, pp. 177):

- the ability to use e-learning tools with confidence,
- the ability to upload teaching materials and announcements to the platform,
- the ability to hold synchronous and asynchronous discussions,
- the ability to analyze the learning process based on the logs of the system (e.g., student access time, the number of quiz attempts or the number of views for specific resources),
- the ability to modify and adapt textual, audio and video materials to suit them to the needs of students,
- the ability to use electronic databases to enhance the process of materials authoring.

Based upon the necessary teacher qualities, Compton (2009) discusses four responsibilities that language teacher training programs need to assume to prepare future language teachers for quality online language teaching. The responsibilities may be listed as:

1) Developing online language teaching skills through existing courses (language teacher education should include technology, methodology and evaluation courses that focus on on online language teaching issues)
2) Developing online teaching skills at different levels of expertise and responsibilities for different roles (novice, proficient, expert levels of expertise)
3) Revamping existing technology training (technology training should start early in language teacher training programmes.)
4) Implementing early virtual field experiences and virtual practicum

Studies related to foreign language learning via e-learning differ from each other in terms of their research focus. When studies in the field of foreign language teaching and learning via e-learning are analyzed, it is seen that in some studies perceptions and attitude of teachers’ and learners’ towards e-learning have been identified by researchers (Cakir &Solak, 2014; Oz, 2015; Sahin-Kizil, 2011; Srichanyachon, 2013). In Cakir &Solak’s study, it was found that Turkish learners had positive attitude towards e-learning in foreign language courses. In Oz’s study, positive correlations were found between the attitudes towards foreign language learning and attitudes towards online learning. In Sahin-Kizil’s study, English teachers were found to have positive attitudes towards online learning. In Srichanyachon’s study, students’ attitude towards an online English class was found to be moderate level. Besides, some studies have compared e-learning and traditional classroom in terms of teachers’ and learners’ perspectives or student performance (Grosu &David, 2013; Trajanovic, Domazet &Misic-Ilic, 2007). In Grosu &David’s study, undergraduate students’ and foreign language trainers’ perspectives about e-learning were investigated and it was found that both groups shared views on
the advantages of e-learning in foreign language education. In Trajanovic, Domazet & Misic-Ilic’s study, online learning students were found to have scored higher than traditional learning students. However, there are limited studies (Baturay, 2011; Cetin & Akar, 2012) identifying real e-learning experiences and teachers’ and students’ views and satisfaction with foreign language courses via e-learning. In Baturay (2011)’s study, sense of classroom community, cognitive learning, satisfaction, the level of the Internet self-efficacy, and achievement scores of students were investigated and it was found that satisfaction of students from foreign language courses via e-learning is highly related to their perceived cognitive learning. In Cetin & Akar’s study, e-learning system was investigated according to teachers’ perspectives. Therefore, the present study, investigating freshmen students’ views about foreign language courses delivered via e-learning and focusing on all the important factors of an e-learning system such as learner, instructor, system, content, service and contextual factors may be an attempt to address the lack in the literature.

Starting with the fall semester of 2012-2013 academic year, e-learning is applied in the education of English as a compulsory course in a state university in Turkey (http://www.uzemturkiye.com/). English as a compulsory course is offered to freshmen students in the first and second semester. Foreign Language I and II courses are entirely conducted via Internet through a Learning Management System (LMS). Students do not meet the course instructor, except for the synchronous weekly meeting. These courses mostly focus on A1 level with vocabulary, grammar, reading and listening skills but in this e-learning context speaking skills cannot be focused on because there are no tools to support speaking in the LMS used in the university. Therefore, students do not have the opportunity to improve their speaking skills in this e-learning system which is also found in Grosu & David (2013)’s study that speaking skills are difficult to acquire in foreign language courses through e-learning. In the LMS which is used in this study, there are no communication and collaboration tools such as chats, e-mail and forums. Also, power point slides, which are prepared by the English course instructors collectively, are used to present the material. The instructor uses students’ native language while teaching grammatical structures.

Since it is the first time that the foreign languages courses are implemented via e-learning, it needs to be investigated whether the quality of e-learning system is up to the standard. As an important stakeholder of e-learning, it is important to seek students’ views and their satisfaction levels regarding e-learning in foreign language courses. Based upon the findings obtained from this study, it may be possible to shed light on the betterment of the e-learning system for foreign language courses.

Hence, the aim of this research is to investigate the views of freshmen students on foreign language courses delivered through e-learning system. This research aims to answer the following research questions:

1) What do freshmen students think about foreign language courses delivered through e-learning system?

2) Are there statistically significant differences between students’ views in terms of age, gender, time spent on using e-learning system and the faculty they study at?

METHODOLOGY

Research Design
This research was designed using the survey model. Survey models are used to describe the attitudes, opinions, behaviors, or characteristics of the population (Creswell, 2012). Survey model can be defined as a research approach which describes a situation, which existed in the past or still exists, as it existed. In the survey model, the situations, individuals or objects are studied in their own conditions and defined as they are. No effort is paid to change or affect them (Karasar, 2012; p. 77). Therefore, in this study
freshmen students’ views on foreign language courses via e-learning are identified and presented according to the research questions.

Participants

The sample of the research was 478 freshmen students enrolled in Foreign Language I and II courses in four different faculties and one vocational college at a state university in Turkey. A scale was administered to the students who were willing to participate in the study. The demographic properties of the participants are presented in Table 1:

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-20</td>
<td>342</td>
<td>71,5</td>
</tr>
<tr>
<td>21-24</td>
<td>136</td>
<td>28,5</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>238</td>
<td>49,8</td>
</tr>
<tr>
<td>Male</td>
<td>240</td>
<td>50,2</td>
</tr>
<tr>
<td><strong>Time on Using E-Learning System (per day)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1 hour</td>
<td>343</td>
<td>71,8</td>
</tr>
<tr>
<td>More than 1 hour</td>
<td>135</td>
<td>28,2</td>
</tr>
<tr>
<td><strong>Faculty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>98</td>
<td>20,5</td>
</tr>
<tr>
<td>Science and Arts</td>
<td>99</td>
<td>20,7</td>
</tr>
<tr>
<td>Engineering</td>
<td>91</td>
<td>19</td>
</tr>
<tr>
<td>Economics and Administrative Sciences</td>
<td>92</td>
<td>19,2</td>
</tr>
<tr>
<td>Vocational College</td>
<td>98</td>
<td>20,5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>478</td>
<td>100</td>
</tr>
</tbody>
</table>

Data Collection

The research data were collected at the end of the Spring Semester of 2012-2013 Academic Year, which was the first year of e-learning application. Data were collected through a five-point Likert type scale, ranging from 1 = Strongly Disagree (SD) to 5 = Strongly Agree (SA), which was developed by Ozkan and Koseler (2009). Ozkan and Koseler (2009) proposed a six-dimensional assessment of learning management systems. The scale included six dimensions and sixty-eight items. The first part of the scale included five demographic questions about age, sex, time spent on using a computer/Internet per day, time spent on using a computer/Internet for educational purposes per day and time spent on using e-learning system per day. The second part of the scale was ‘overall’ where learners could evaluate the e-learning system in general. The six dimensions of the scale included ‘learners’ perspective’, ‘instructor attitudes’, ‘system quality’, ‘information content quality’, ‘service quality’ and ‘supportive issues’ for e-learning in educational organizations. The scale was tested for its reliability by the researchers. The scale was applied to 25 freshmen students studying at the same university. The whole scale reliability was found as $\alpha = 0.98$. The reliability results obtained for the sub-dimensions were found 0.90, 0.95, 0.95, 0.98, 0.92 and 0.94 respectively. The closer a Cronbach’s alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale. According to George and Mallery (2003; p. 231), reliability coefficient values were evaluated as "_ > .9 – excellent, _ > .8 – good, _ > .7 – acceptable, _ > .6 – questionable, _ > .5 – poor, and _ < .5 – unacceptable". Hence, it could be stated that the Cronbach’s alpha values obtained in the present study were at an excellent level.

Data Analysis

Data were analyzed using the Statistical Package for Social Sciences (SPSS. 19). Descriptive statistics were utilized to run for percentages, mean and standard deviation. To answer the first research question “What do freshmen students think about foreign
language courses delivered through e-learning system”, mean, percentages and standard deviation were calculated. To answer the second research question “Is there a significant difference between students’ views in terms of age, gender, time spent on using e-learning system and the faculty they study at”, independent samples t-test was utilized to test whether there was a significant difference between students’ views in terms of age, gender, time spent on using e-learning system and one-way ANOVA was utilized to determine whether there was a significant difference between students’ views in terms of the faculty they study at.

RESULTS

To present a planned report of the results, the findings were structured along the research questions.

What do Freshmen Students Think about Foreign Language Courses Delivered through E-Learning System?

In Table 2, students’ views on e-learning and e-learning system are presented:

Table 2
Participants’ views on ‘overall’ part

<table>
<thead>
<tr>
<th>No</th>
<th>Overall</th>
<th>SD</th>
<th>D</th>
<th>PA</th>
<th>A</th>
<th>SA</th>
<th>x</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E-learning helps me to manage my learning more systematically.</td>
<td>41.4%</td>
<td>24.3%</td>
<td>16.1%</td>
<td>12.6%</td>
<td>5.6%</td>
<td>2.17</td>
<td>1.25</td>
</tr>
<tr>
<td>2</td>
<td>Overall, I am satisfied with e-learning system.</td>
<td>41.4%</td>
<td>25.3%</td>
<td>15.5%</td>
<td>12.1%</td>
<td>5.7%</td>
<td>2.15</td>
<td>1.24</td>
</tr>
<tr>
<td>3</td>
<td>Overall, I find e-learning system successful.</td>
<td>42.5%</td>
<td>25.5%</td>
<td>15.1%</td>
<td>12.3%</td>
<td>4.6%</td>
<td>2.11</td>
<td>1.21</td>
</tr>
</tbody>
</table>

As can be seen from Table 2, the majority of the responses are on the strongly disagree side, which implies that most of the students are not content with e-learning application in general. In Table 3, 4, 5, 6, 7 and 8 below, participants’ views on the six dimensions of the scale are shown:

Table 3
Participants’ views on ‘learners’ perspective’ dimension

<table>
<thead>
<tr>
<th>No</th>
<th>Learner’s perspective</th>
<th>SD</th>
<th>D</th>
<th>PA</th>
<th>A</th>
<th>SA</th>
<th>x</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Face-to-face education is better than distance education in learning process.</td>
<td>24.7%</td>
<td>11.7%</td>
<td>7.9%</td>
<td>15.7%</td>
<td>40%</td>
<td>3.35</td>
<td>1.66</td>
</tr>
<tr>
<td>5</td>
<td>I can manage my “study time” effectively and easily complete assignments on time by using e-learning.</td>
<td>40.6%</td>
<td>28.5%</td>
<td>17.4%</td>
<td>9.2%</td>
<td>4.3%</td>
<td>2.08</td>
<td>1.16</td>
</tr>
<tr>
<td>6</td>
<td>I enjoy attending to the e-learning sessions overall.</td>
<td>45%</td>
<td>26.2%</td>
<td>15.7%</td>
<td>8.6%</td>
<td>4.5%</td>
<td>2.02</td>
<td>1.17</td>
</tr>
<tr>
<td>7</td>
<td>E-learning improves my success in the module.</td>
<td>48.3%</td>
<td>25.3%</td>
<td>14.2%</td>
<td>7.5%</td>
<td>4.7%</td>
<td>1.95</td>
<td>1.16</td>
</tr>
<tr>
<td>8</td>
<td>I find all my educational need from e-learning.</td>
<td>43.7%</td>
<td>24.7%</td>
<td>17.2%</td>
<td>10.3%</td>
<td>4.1%</td>
<td>2.06</td>
<td>1.18</td>
</tr>
<tr>
<td>9</td>
<td>E-learning makes the communication easier with instructor and other classmates for me.</td>
<td>46%</td>
<td>28.9%</td>
<td>14%</td>
<td>6.5%</td>
<td>4.6%</td>
<td>1.95</td>
<td>1.13</td>
</tr>
<tr>
<td>10</td>
<td>In my studies, I am self-disciplined and find it easy to set aside reading and homework time.</td>
<td>17.2%</td>
<td>13.2%</td>
<td>28%</td>
<td>31.8%</td>
<td>9.8%</td>
<td>3.04</td>
<td>1.24</td>
</tr>
</tbody>
</table>
I believe that e-learning is a very efficient educational tool.  

E-learning helped me to become more familiar with the module.  

I have previous experience with e-learning.

The negative views of students also continue in that section. Table 3 suggests that for most of the statements, the majority of the students disagree with e-learning application in terms of learners’ perspective. Also, in statement 4, students agree the positive effect of face-to-face education in the learning process. Furthermore, in statement 13 it is seen that most of the students have not had e-learning experience before.

Table 4
Participants’ views on ‘instructor attitudes’ dimension

<table>
<thead>
<tr>
<th>No</th>
<th>Instructor Attitudes</th>
<th>SD</th>
<th>D</th>
<th>PA</th>
<th>A</th>
<th>SA</th>
<th>( \bar{x} )</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Instructor clearly informs the students about grading policy via e-learning.</td>
<td>26.2%</td>
<td>19%</td>
<td>27.2%</td>
<td>18.8%</td>
<td>8.8%</td>
<td>2.65</td>
<td>1.29</td>
</tr>
<tr>
<td>15</td>
<td>The instructor returns e-mails/posts within 24 h via e-learning.</td>
<td>22.2%</td>
<td>19.2%</td>
<td>33.3%</td>
<td>19.5%</td>
<td>5.8%</td>
<td>2.68</td>
<td>1.19</td>
</tr>
<tr>
<td>16</td>
<td>The instructor follows up student problems and tries to find out solution via e-learning.</td>
<td>23.6%</td>
<td>17.6%</td>
<td>30.8%</td>
<td>20.3%</td>
<td>7.7%</td>
<td>2.71</td>
<td>1.25</td>
</tr>
<tr>
<td>17</td>
<td>Instructor frequently updates lecture notes and fixes all the errors and mistakes in the documents on the e-learning.</td>
<td>20.1%</td>
<td>14.4%</td>
<td>29.5%</td>
<td>26.2%</td>
<td>9.8%</td>
<td>2.91</td>
<td>1.26</td>
</tr>
<tr>
<td>18</td>
<td>The instructor responds promptly to questions and concerns via e-learning.</td>
<td>20.9%</td>
<td>14.6%</td>
<td>27.4%</td>
<td>25.2%</td>
<td>11.9%</td>
<td>2.92</td>
<td>1.31</td>
</tr>
<tr>
<td>19</td>
<td>The instructor is proficient with all the content used in the course.</td>
<td>20.1%</td>
<td>13.4%</td>
<td>28.9%</td>
<td>27%</td>
<td>10.6%</td>
<td>2.95</td>
<td>1.28</td>
</tr>
<tr>
<td>20</td>
<td>The instructor created an online environment conducive and enjoyable for learning via e-learning.</td>
<td>19.5%</td>
<td>16.1%</td>
<td>27.6%</td>
<td>27%</td>
<td>9.8%</td>
<td>2.92</td>
<td>1.26</td>
</tr>
<tr>
<td>21</td>
<td>The instructor is good at communication with students via e-learning.</td>
<td>23.4%</td>
<td>16.1%</td>
<td>25.5%</td>
<td>24.1%</td>
<td>10.9%</td>
<td>2.83</td>
<td>1.32</td>
</tr>
<tr>
<td>22</td>
<td>I think communicating with the instructor via e-learning is important and valuable.</td>
<td>35.6%</td>
<td>26.6%</td>
<td>17.6%</td>
<td>11.8%</td>
<td>8.4%</td>
<td>2.31</td>
<td>1.29</td>
</tr>
<tr>
<td>23</td>
<td>I find it easy to communicate with the instructor via e-learning.</td>
<td>26.2%</td>
<td>19.5%</td>
<td>23.2%</td>
<td>15.1%</td>
<td>16%</td>
<td>2.76</td>
<td>1.41</td>
</tr>
<tr>
<td>24</td>
<td>Exam and assignment results are announced on time via e-learning.</td>
<td>25.3%</td>
<td>14%</td>
<td>24.1%</td>
<td>21.1%</td>
<td>15.5%</td>
<td>2.87</td>
<td>1.40</td>
</tr>
<tr>
<td>25</td>
<td>The instructor encourages us to interact with other students by using e-learning interactive tools.</td>
<td>26.4%</td>
<td>15.1%</td>
<td>30.3%</td>
<td>19.2%</td>
<td>9%</td>
<td>2.69</td>
<td>1.29</td>
</tr>
</tbody>
</table>

It is very vivid in Table 4 that majority of the responses partially agree the positive attitudes and behaviors of instructors in e-learning application. An instructor on an online learning environment is expected to have skills such as creating an online enjoyable environment, being knowledgeable about the content, being good at communication with students and responding quickly to e-mails/posts, questions and concerns.
Table 5
Participants' views on 'system quality' dimension

<table>
<thead>
<tr>
<th>No</th>
<th>System Quality</th>
<th>SD</th>
<th>D</th>
<th>PA</th>
<th>A</th>
<th>SA</th>
<th>( \bar{x} )</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>E-learning system's graphical user interface is suitable for e-learning systems.</td>
<td>35.1%</td>
<td>16.7%</td>
<td>29.7%</td>
<td>13.6%</td>
<td>4.8%</td>
<td>2.36</td>
<td>1.22</td>
</tr>
<tr>
<td>27</td>
<td>The program directions and navigations are clear.</td>
<td>29.5%</td>
<td>17.6%</td>
<td>28%</td>
<td>18.8%</td>
<td>6.1%</td>
<td>2.54</td>
<td>1.26</td>
</tr>
<tr>
<td>28</td>
<td>E-learning supports interactivity between learners and system by chat, forums, discussions, etc.</td>
<td>27.4%</td>
<td>15.1%</td>
<td>29.9%</td>
<td>22.2%</td>
<td>5.4%</td>
<td>2.63</td>
<td>1.25</td>
</tr>
<tr>
<td>29</td>
<td>I have not faced any system errors on e-learning system.</td>
<td>26.4%</td>
<td>18.8%</td>
<td>29.3%</td>
<td>14.9%</td>
<td>10.6%</td>
<td>2.65</td>
<td>1.30</td>
</tr>
<tr>
<td>30</td>
<td>When I counter an error in the system, I can get immediate feedback by e-mail and telephone.</td>
<td>29.9%</td>
<td>19.7%</td>
<td>30.5%</td>
<td>14.4%</td>
<td>5.5%</td>
<td>2.46</td>
<td>1.21</td>
</tr>
<tr>
<td>31</td>
<td>Navigation is very easy on e-learning.</td>
<td>24.5%</td>
<td>17.6%</td>
<td>28.7%</td>
<td>21.5%</td>
<td>7.7%</td>
<td>2.71</td>
<td>1.26</td>
</tr>
<tr>
<td>32</td>
<td>I can find required information easily on e-learning.</td>
<td>26.4%</td>
<td>17.6%</td>
<td>30.1%</td>
<td>18.6%</td>
<td>7.3%</td>
<td>2.63</td>
<td>1.26</td>
</tr>
<tr>
<td>33</td>
<td>In the e-learning system I can easily navigate where I want.</td>
<td>29.1%</td>
<td>15.9%</td>
<td>32%</td>
<td>18.6%</td>
<td>4.4%</td>
<td>2.53</td>
<td>1.21</td>
</tr>
<tr>
<td>34</td>
<td>E-learning is easily accessible via Internet.</td>
<td>25.1%</td>
<td>13%</td>
<td>29.1%</td>
<td>24.3%</td>
<td>8.6%</td>
<td>2.78</td>
<td>1.29</td>
</tr>
<tr>
<td>35</td>
<td>E-learning is a good educational portal and improves my learning.</td>
<td>31.2%</td>
<td>16.5%</td>
<td>28.7%</td>
<td>18%</td>
<td>5.6%</td>
<td>2.50</td>
<td>1.26</td>
</tr>
<tr>
<td>36</td>
<td>Help option is available on the system.</td>
<td>21.3%</td>
<td>18%</td>
<td>29.7%</td>
<td>22.2%</td>
<td>8.8%</td>
<td>2.79</td>
<td>1.25</td>
</tr>
<tr>
<td>37</td>
<td>E-learning system is accessible 7 days 24h.</td>
<td>25.1%</td>
<td>16.1%</td>
<td>27%</td>
<td>20.3%</td>
<td>11.5%</td>
<td>2.77</td>
<td>1.33</td>
</tr>
<tr>
<td>38</td>
<td>I am informed about all the course announcements on e-learning system by using 'announcements' tool.</td>
<td>22.4%</td>
<td>14.4%</td>
<td>29.5%</td>
<td>22.6%</td>
<td>11.1%</td>
<td>2.86</td>
<td>1.30</td>
</tr>
<tr>
<td>39</td>
<td>Fonts (style, color, and saturation) are easy to read in both on-screen and in printed versions.</td>
<td>20.3%</td>
<td>14.2%</td>
<td>26.6%</td>
<td>25.7%</td>
<td>13.2%</td>
<td>2.97</td>
<td>1.32</td>
</tr>
<tr>
<td>40</td>
<td>When I log in, I prefer e-learning system to provide me a personalized entry page (i.e., showing my progress, showing which chapters I have to revise, etc.).</td>
<td>25.7%</td>
<td>19%</td>
<td>27.4%</td>
<td>20.5%</td>
<td>7.3%</td>
<td>2.65</td>
<td>1.26</td>
</tr>
</tbody>
</table>

Table 5 shows that students also partially agree system quality of e-learning application. What is put forward here is that students really expect the e-learning system to be easily accessible, clear, easy to navigate and interactive by chats and forums.

Table 6
Participants' views on 'information content quality' dimension

<table>
<thead>
<tr>
<th>No</th>
<th>Information Content Quality</th>
<th>SD</th>
<th>D</th>
<th>PA</th>
<th>A</th>
<th>SA</th>
<th>( \bar{x} )</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td>Lecture notes are the core learning materials on e-learning system.</td>
<td>28.7%</td>
<td>16.1%</td>
<td>23%</td>
<td>23.4%</td>
<td>8.8%</td>
<td>2.68</td>
<td>1.34</td>
</tr>
<tr>
<td>42</td>
<td>Course content and presentation gain attention.</td>
<td>27.4%</td>
<td>19.2%</td>
<td>31.2%</td>
<td>16.5%</td>
<td>5.6%</td>
<td>2.54</td>
<td>1.21</td>
</tr>
<tr>
<td>43</td>
<td>Course content and presentation are long enough to cover all content.</td>
<td>27.6%</td>
<td>18.6%</td>
<td>28.2%</td>
<td>20.1%</td>
<td>5.4%</td>
<td>2.57</td>
<td>1.24</td>
</tr>
</tbody>
</table>
The course content is covered to an appropriate degree of breadth.  

<table>
<thead>
<tr>
<th>Question</th>
<th>SD</th>
<th>D</th>
<th>PA</th>
<th>A</th>
<th>SA</th>
<th>x</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>The course content is covered to an appropriate degree of breadth.</td>
<td>26.4%</td>
<td>16.7%</td>
<td>29.3%</td>
<td>20.1%</td>
<td>7.5%</td>
<td>2,66</td>
<td>1,27</td>
</tr>
<tr>
<td>The content is up-to-date.</td>
<td>21.8%</td>
<td>16.5%</td>
<td>28.2%</td>
<td>23.8%</td>
<td>9.7%</td>
<td>2,83</td>
<td>1,28</td>
</tr>
<tr>
<td>I find it easy to understand and follow the content in lecture notes</td>
<td>24.9%</td>
<td>18.8%</td>
<td>25.5%</td>
<td>22%</td>
<td>8.8%</td>
<td>2,71</td>
<td>1,29</td>
</tr>
<tr>
<td>Lecture notes are supported by multimedia tools (flash animations, simulations, videos, audios, etc.).</td>
<td>22.6%</td>
<td>16.7%</td>
<td>30.8%</td>
<td>19.5%</td>
<td>10.5%</td>
<td>2,78</td>
<td>1,28</td>
</tr>
<tr>
<td>The lecture notes are interactive.</td>
<td>24.5%</td>
<td>16.3%</td>
<td>33.5%</td>
<td>18.4%</td>
<td>7.3%</td>
<td>2,68</td>
<td>1,23</td>
</tr>
<tr>
<td>Course content on the e-learning system is integral.</td>
<td>23.6%</td>
<td>12.6%</td>
<td>31%</td>
<td>25.5%</td>
<td>7.3%</td>
<td>2,80</td>
<td>1,26</td>
</tr>
<tr>
<td>Abstract concepts (principles, formulas, rules, etc.) are illustrated with concrete, specific examples.</td>
<td>24.7%</td>
<td>17.8%</td>
<td>30.8%</td>
<td>19.9%</td>
<td>6.9%</td>
<td>2,67</td>
<td>1,24</td>
</tr>
<tr>
<td>Lecture notes provided to me via e-learning are very enjoyable.</td>
<td>20.3%</td>
<td>16.1%</td>
<td>29.1%</td>
<td>18.2%</td>
<td>16.3%</td>
<td>2,94</td>
<td>1,34</td>
</tr>
<tr>
<td>Exam questions and assignments are clearly explained.</td>
<td>25.5%</td>
<td>15.7%</td>
<td>26.8%</td>
<td>21.5%</td>
<td>10.5%</td>
<td>2,76</td>
<td>1,33</td>
</tr>
<tr>
<td>Supporting materials, web-links and given examples are up-to-date, real-life examples, they improve my learning.</td>
<td>25.3%</td>
<td>17.4%</td>
<td>32%</td>
<td>17.6%</td>
<td>7.7%</td>
<td>2,65</td>
<td>1,25</td>
</tr>
<tr>
<td>Vocabulary and terminology used are appropriate for the learners.</td>
<td>20.3%</td>
<td>11.9%</td>
<td>32.8%</td>
<td>24.9%</td>
<td>10%</td>
<td>2,92</td>
<td>1,26</td>
</tr>
<tr>
<td>The learning objectives of the module are stated clearly on e-learning.</td>
<td>20.9%</td>
<td>11.7%</td>
<td>31.6%</td>
<td>26.6%</td>
<td>9.2%</td>
<td>2,91</td>
<td>1,26</td>
</tr>
</tbody>
</table>

Table 6 also reveals that for most of the statements, the majority of the responses are on the partially agree side. Students expect the content to be enough, clear, up-to-date, interactive and enjoyable.

Table 7
Participants’ views on ‘service quality’ dimension

<table>
<thead>
<tr>
<th>No</th>
<th>Service Quality</th>
<th>SD</th>
<th>D</th>
<th>PA</th>
<th>A</th>
<th>SA</th>
<th>x</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>56</td>
<td>Instructor’s attitudes are good to learners.</td>
<td>23.6%</td>
<td>13.6%</td>
<td>33.1%</td>
<td>19.7%</td>
<td>10%</td>
<td>2,79</td>
<td>1,28</td>
</tr>
<tr>
<td>57</td>
<td>Instructor’s attitudes are friendly to learners.</td>
<td>21.5%</td>
<td>15.7%</td>
<td>34.5%</td>
<td>19.7%</td>
<td>8.6%</td>
<td>2,78</td>
<td>1,23</td>
</tr>
<tr>
<td>58</td>
<td>Instructor is knowledgeable enough about content.</td>
<td>16.7%</td>
<td>13%</td>
<td>29.9%</td>
<td>27.8%</td>
<td>12.6%</td>
<td>3,06</td>
<td>1,26</td>
</tr>
<tr>
<td>59</td>
<td>The service supported by the university is good enough.</td>
<td>19.2%</td>
<td>15.1%</td>
<td>32.6%</td>
<td>21.8%</td>
<td>11.3%</td>
<td>2,91</td>
<td>1,26</td>
</tr>
<tr>
<td>60</td>
<td>I can contact with the instructor via mail or phone or fax.</td>
<td>24.9%</td>
<td>14.4%</td>
<td>33.1%</td>
<td>18%</td>
<td>9.6%</td>
<td>2,73</td>
<td>1,28</td>
</tr>
<tr>
<td>61</td>
<td>I do not encounter any problems during communicating with university administration and help desk.</td>
<td>23.6%</td>
<td>14.4%</td>
<td>30.8%</td>
<td>20.5%</td>
<td>10.7%</td>
<td>2,80</td>
<td>1,30</td>
</tr>
<tr>
<td>62</td>
<td>I do not experience any problems during registrations.</td>
<td>22.6%</td>
<td>14.6%</td>
<td>28.9%</td>
<td>21.3%</td>
<td>12.6%</td>
<td>2,87</td>
<td>1,32</td>
</tr>
<tr>
<td>63</td>
<td>I can easily solve when I encounter a problem during admission to a module in registrations.</td>
<td>19.7%</td>
<td>14%</td>
<td>30.1%</td>
<td>24.7%</td>
<td>11.5%</td>
<td>2,94</td>
<td>1,28</td>
</tr>
</tbody>
</table>

Table 7 shows that majority of the responses are also on the partially agree side in service quality dimension. Students partially agree the quality of service provided to
them. Students expect the instructor to be friendly, proficient with the content and accessible. Moreover, students expect not to have any problems during communication with help desk and access to the modules.

Table 8
Participants’ views on ‘supportive issues’ dimension

<table>
<thead>
<tr>
<th>No</th>
<th>Supportive Issues</th>
<th>SD</th>
<th>D</th>
<th>PA</th>
<th>A</th>
<th>SA</th>
<th>\bar{x}</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>64</td>
<td>E-learning lecture notes are prepared by obeying the ethical and legal issues.</td>
<td>20.3%</td>
<td>8.6%</td>
<td>31.6%</td>
<td>25.5%</td>
<td>14%</td>
<td>3.04</td>
<td>1.31</td>
</tr>
<tr>
<td>65</td>
<td>The e-learning supported module provides any ethics policies that outline rules, regulations, guidelines, and prohibitions.</td>
<td>19%</td>
<td>13.2%</td>
<td>29.9%</td>
<td>24.5%</td>
<td>13.4%</td>
<td>3.00</td>
<td>1.30</td>
</tr>
<tr>
<td>66</td>
<td>If the use of e-learning was optional, I would still prefer to use e-learning system as a supportive tool as it helps my performance in the module.</td>
<td>21.8%</td>
<td>15.3%</td>
<td>36.4%</td>
<td>17.2%</td>
<td>9.4%</td>
<td>2.77</td>
<td>1.23</td>
</tr>
<tr>
<td>67</td>
<td>If it was trendier and more popular, I would prefer to take this module totally online from home without having to come to the face-to-face lectures.</td>
<td>36%</td>
<td>14%</td>
<td>25.9%</td>
<td>15.1%</td>
<td>9%</td>
<td>2.47</td>
<td>1.35</td>
</tr>
<tr>
<td>68</td>
<td>E-learning helps me to cut-down my expenditure such as paper cost, communication cost (i.e., phone), transportation cost, etc.</td>
<td>30.5%</td>
<td>13.2%</td>
<td>30.3%</td>
<td>15.7%</td>
<td>10.3%</td>
<td>2.62</td>
<td>1.33</td>
</tr>
</tbody>
</table>

As can be seen from Table 8, the majority of the responses are also on the partially agree side for supportive issues of e-learning application. In statement 66, it is revealed that students partially agree to use e-learning system as a supportive tool if e-learning was still optional. Furthermore, in statement 67, it is seen that students really prefer face-to-face lectures to online courses.

Table 9
Distribution of mean scores

<table>
<thead>
<tr>
<th>Parts and Dimensions</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>\bar{x}</th>
<th>Std</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>478</td>
<td>1.00</td>
<td>5.00</td>
<td>2.1436</td>
<td>1.1785</td>
</tr>
<tr>
<td>Learner’s perspective</td>
<td>478</td>
<td>1.00</td>
<td>5.00</td>
<td>2.2475</td>
<td>.82948</td>
</tr>
<tr>
<td>Instructor Attitudes</td>
<td>478</td>
<td>1.00</td>
<td>5.00</td>
<td>2.7666</td>
<td>.90510</td>
</tr>
<tr>
<td>System Quality</td>
<td>478</td>
<td>1.00</td>
<td>5.00</td>
<td>2.6555</td>
<td>.94310</td>
</tr>
<tr>
<td>Information Content Quality</td>
<td>478</td>
<td>1.00</td>
<td>5.00</td>
<td>2.8809</td>
<td>1.00268</td>
</tr>
<tr>
<td>Service Quality</td>
<td>478</td>
<td>1.00</td>
<td>5.00</td>
<td>2.7155</td>
<td>1.06515</td>
</tr>
</tbody>
</table>

When the mean scores of each dimension are analyzed from Table 9, it is seen that the mean scores are between 2 and 3. The students’ views on foreign language courses delivered via e-learning are negative with an ‘overall’ part mean score of 2.14. Moreover, students disagree ‘learners’ perspective’ dimension with a mean score of 2.24. However, students partially agree ‘instructor attitudes’, ‘system quality’, ‘information content quality’, ‘service quality’ and ‘supportive issues’ dimensions.
Is There a Significant Difference between Students’ Views in Terms of Age, Gender, Time Spent on Using E-Learning System and the Faculty They Study at?

Table 10
Independent samples t-test results for revealing differences between students’ views and ages

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Student’s Age</th>
<th>N</th>
<th>$\bar{x}$</th>
<th>Std</th>
<th>df</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learner’s perspective</td>
<td>18-20</td>
<td>342</td>
<td>2.27</td>
<td>0.81</td>
<td>476</td>
<td>1,034</td>
<td>.302</td>
</tr>
<tr>
<td></td>
<td>21-24</td>
<td>136</td>
<td>2.19</td>
<td>0.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor Attitudes</td>
<td>18-20</td>
<td>342</td>
<td>2.73</td>
<td>0.89</td>
<td>476</td>
<td>-1.254</td>
<td>.211</td>
</tr>
<tr>
<td></td>
<td>21-24</td>
<td>136</td>
<td>2.85</td>
<td>0.93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Quality</td>
<td>18-20</td>
<td>342</td>
<td>2.69</td>
<td>0.94</td>
<td>476</td>
<td>1.332</td>
<td>.183</td>
</tr>
<tr>
<td></td>
<td>21-24</td>
<td>136</td>
<td>2.56</td>
<td>0.95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information Content Quality</td>
<td>18-20</td>
<td>342</td>
<td>2.76</td>
<td>0.95</td>
<td>476</td>
<td>.719</td>
<td>.472</td>
</tr>
<tr>
<td></td>
<td>21-24</td>
<td>136</td>
<td>2.69</td>
<td>0.92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Quality</td>
<td>18-20</td>
<td>342</td>
<td>2.86</td>
<td>1.00</td>
<td>476</td>
<td>-.808</td>
<td>.420</td>
</tr>
<tr>
<td></td>
<td>21-24</td>
<td>136</td>
<td>2.94</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supportive Issues</td>
<td>18-20</td>
<td>342</td>
<td>2.69</td>
<td>1.06</td>
<td>476</td>
<td>-.970</td>
<td>.332</td>
</tr>
<tr>
<td></td>
<td>21-24</td>
<td>136</td>
<td>2.79</td>
<td>1.07</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the results of the independent samples t-test, there were not statistically significant differences between age and all the dimensions of the scale. In other words, students’ views did not differ according to ages 18-20 and 21-24.

Table 11
Independent samples t-test results for revealing differences between students’ views and gender

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Gender</th>
<th>N</th>
<th>$\bar{x}$</th>
<th>Std</th>
<th>df</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learner’s perspective</td>
<td>Male</td>
<td>240</td>
<td>2.18</td>
<td>0.87</td>
<td>476</td>
<td>-1.790</td>
<td>.074</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>238</td>
<td>2.32</td>
<td>0.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor Attitudes</td>
<td>Male</td>
<td>240</td>
<td>2.75</td>
<td>0.96</td>
<td>476</td>
<td>-.518</td>
<td>.605</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>238</td>
<td>2.79</td>
<td>0.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Quality</td>
<td>Male</td>
<td>240</td>
<td>2.58</td>
<td>0.97</td>
<td>476</td>
<td>-1.669</td>
<td>.096</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>238</td>
<td>2.73</td>
<td>0.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information Content Quality</td>
<td>Male</td>
<td>240</td>
<td>2.65</td>
<td>0.98</td>
<td>476</td>
<td>-2.019</td>
<td>.044*</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>238</td>
<td>2.83</td>
<td>0.90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Quality</td>
<td>Male</td>
<td>240</td>
<td>2.84</td>
<td>1.07</td>
<td>476</td>
<td>-.855</td>
<td>.393</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>238</td>
<td>2.92</td>
<td>0.93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supportive Issues</td>
<td>Male</td>
<td>240</td>
<td>2.72</td>
<td>1.13</td>
<td>476</td>
<td>.067</td>
<td>.946</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>238</td>
<td>2.71</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* $p < .05$

Based on the results of the t-test, it was unearthed that there were significant differences between males and females only in the ‘Information Content Quality’ dimension ($p<0.05$). Female university students exhibited more positive views than their male counterparts in ‘Information Content Quality’ dimension.
Table 12
Independent samples t-test results for revealing differences between students’ views and time spent on e-learning system

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>E-learning time</th>
<th>N</th>
<th>( \bar{x} )</th>
<th>Std</th>
<th>df</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learner’s perspective</td>
<td>Less than 1 h</td>
<td>343</td>
<td>2,22</td>
<td>0,83</td>
<td>476</td>
<td>-1,003</td>
<td>.316</td>
</tr>
<tr>
<td></td>
<td>More than 1 h</td>
<td>135</td>
<td>2,31</td>
<td>0,84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor Attitudes</td>
<td>Less than 1 h</td>
<td>343</td>
<td>2,74</td>
<td>0,89</td>
<td>476</td>
<td>-0,925</td>
<td>.355</td>
</tr>
<tr>
<td></td>
<td>More than 1 h</td>
<td>135</td>
<td>2,83</td>
<td>0,94</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Quality</td>
<td>Less than 1 h</td>
<td>343</td>
<td>2,65</td>
<td>0,93</td>
<td>476</td>
<td>-0,63</td>
<td>.500</td>
</tr>
<tr>
<td></td>
<td>More than 1 h</td>
<td>135</td>
<td>2,66</td>
<td>0,97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information Content Quality</td>
<td>Less than 1 h</td>
<td>343</td>
<td>2,73</td>
<td>0,93</td>
<td>476</td>
<td>-0,333</td>
<td>.739</td>
</tr>
<tr>
<td></td>
<td>More than 1 h</td>
<td>135</td>
<td>2,76</td>
<td>0,99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Quality</td>
<td>Less than 1 h</td>
<td>343</td>
<td>2,88</td>
<td>1,00</td>
<td>476</td>
<td>-1,43</td>
<td>.886</td>
</tr>
<tr>
<td></td>
<td>More than 1 h</td>
<td>135</td>
<td>2,89</td>
<td>1,02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supportive Issues</td>
<td>Less than 1 h</td>
<td>343</td>
<td>2,67</td>
<td>1,05</td>
<td>476</td>
<td>-1,400</td>
<td>.162</td>
</tr>
<tr>
<td></td>
<td>More than 1 h</td>
<td>135</td>
<td>2,82</td>
<td>1,10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the independent samples t-test results, there were no significant differences between time spent on e-learning system and all the dimensions of the scale. It was expected that students spending more than one hour on e-learning system per day had more positive views on e-learning than those spending less than one hour on e-learning system per day. However, in this research, no significant differences were found. This situation may have resulted from the fact that the research data were collected in the first year of e-learning application and the students may not have adapted to this new application.

Table 13
One-way anova results for revealing differences between students’ views and the faculty students study at

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>N</th>
<th>( \bar{x} )</th>
<th>Std</th>
<th>df</th>
<th>F</th>
<th>P</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learner’s perspective</td>
<td>Education</td>
<td>98</td>
<td>2,54</td>
<td>0,81</td>
<td>4-473</td>
<td>19.440</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>Science Arts</td>
<td>99</td>
<td>1,98</td>
<td>0,75</td>
<td></td>
<td></td>
<td>Edu&gt;Voc.Col.</td>
</tr>
<tr>
<td></td>
<td>Econ. Adm. Sci.</td>
<td>92</td>
<td>2,33</td>
<td>0,78</td>
<td></td>
<td></td>
<td>Eng&gt;Sci.Arts</td>
</tr>
<tr>
<td></td>
<td>Voc. Col.</td>
<td>98</td>
<td>1,81</td>
<td>0,70</td>
<td></td>
<td></td>
<td>Econ&gt;Voc.Col.</td>
</tr>
<tr>
<td></td>
<td>Engineering</td>
<td>91</td>
<td>2,60</td>
<td>0,81</td>
<td></td>
<td></td>
<td>Eng&gt;Voc.Col.</td>
</tr>
<tr>
<td>Instructor Attitudes</td>
<td>Education</td>
<td>98</td>
<td>2,85</td>
<td>0,81</td>
<td>4-473</td>
<td>16.124</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>Voc. Col.</td>
<td>98</td>
<td>2,23</td>
<td>1,04</td>
<td></td>
<td></td>
<td>Econ&gt;Voc.Col.</td>
</tr>
<tr>
<td></td>
<td>Engineering</td>
<td>91</td>
<td>2,87</td>
<td>0,87</td>
<td></td>
<td></td>
<td>Eng&gt;Voc.Col.</td>
</tr>
<tr>
<td>System Quality</td>
<td>Education</td>
<td>98</td>
<td>2,93</td>
<td>0,92</td>
<td>4-473</td>
<td>17.856</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>Science Arts</td>
<td>99</td>
<td>2,47</td>
<td>0,93</td>
<td></td>
<td></td>
<td>Edu&gt;Voc.Col.</td>
</tr>
<tr>
<td></td>
<td>Econ. Adm. Sci.</td>
<td>92</td>
<td>3,01</td>
<td>0,77</td>
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<td>Econ&gt;Sci.Arts</td>
</tr>
<tr>
<td></td>
<td>Voc. Col.</td>
<td>98</td>
<td>2,09</td>
<td>0,91</td>
<td></td>
<td></td>
<td>Econ&gt;Voc.Col.</td>
</tr>
<tr>
<td></td>
<td>Engineering</td>
<td>91</td>
<td>2,82</td>
<td>0,88</td>
<td></td>
<td></td>
<td>Eng&gt;Voc.Col.</td>
</tr>
<tr>
<td>Information Content Quality</td>
<td>Education</td>
<td>98</td>
<td>3,05</td>
<td>0,83</td>
<td>4-473</td>
<td>22.909</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>Science Arts</td>
<td>99</td>
<td>2,51</td>
<td>0,94</td>
<td></td>
<td></td>
<td>Edu&gt;Voc.Col.</td>
</tr>
<tr>
<td></td>
<td>Econ. Adm. Sci.</td>
<td>92</td>
<td>3,24</td>
<td>0,69</td>
<td></td>
<td></td>
<td>Econ&gt;Sci.Arts</td>
</tr>
<tr>
<td></td>
<td>Voc. Col.</td>
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<td>2,17</td>
<td>0,97</td>
<td></td>
<td></td>
<td>Econ&gt;Voc.Col.</td>
</tr>
<tr>
<td></td>
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<td>2,77</td>
<td>0,86</td>
<td></td>
<td></td>
<td>Eng&gt;Voc.Col.</td>
</tr>
</tbody>
</table>

42
To reveal whether there were any significant differences between students’ views in terms of the faculty they study at, one-way anova was utilized. As shown in Table 13, there are significant differences between students’ views in terms of the faculty they study at and all the dimensions of the scale (p<0.05). Students studying at vocational college have more negative views than students studying at faculties of education, arts and sciences, engineering and administrative and economics in all dimensions of the scale.

**DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

In this research, two research questions were posed to obtain information about the views of university students on foreign language courses delivered via e-learning and the data were analyzed using different statistical analysis methods. According to ‘overall’ part, it was revealed that university students were not satisfied with foreign language courses delivered via e-learning in general. They mostly preferred face-to-face instruction to e-learning, which is similar to Inozu and Ilin (2007)’s research findings where the majority of the students did not enjoy online foreign language learning as it lacked opportunities for practice and face-to-face natural interaction. In the current research, this could be explained by the fact that e-learning is rather novel for students and therefore difficult to adapt. Similar to what Dajani (2009) found in his study, this study indicated that the majority of the students had no e-learning experience (item 13) and viewed e-learning negatively. Also, the research data were collected in the first year of e-learning application, which may account for the negative views of students. Students may be used to learning in traditional face-to-face learning and teaching, so it may require some more time to get used to e-learning. In addition, according to what is discussed in Kilickaya, Krajka & Latoch-Zielinska (2014)’s study, Turkish learners require immediate feedback, teacher support and opportunities for real communication in the learning process, as they are not ready yet for independent learning which is provided by e-learning. Besides, it was found out in Murday, Ushida, & Chenoweth (2008)’s study that online foreign language learners have higher level of satisfaction from online foreign language courses over time compared to the face-to-face courses.

Implemented at one university, the generalization of the findings of the current study is limited. Some different findings could be explored in other studies due to instructor characteristics, quality of the e-learning system, content used and student background. For instance, in Srichanyachon (2013)’s research, students’ attitudes towards an online English course was moderate. Furthermore, in this research, the results of the independent samples t-test exhibited no statistically significant differences between students’ ages and their views on e-learning. Unlike the findings of the study conducted by Srichanyachon (2013), the present study found statistically significant differences according to gender. Female university students...
were found to have more positive views than males in the ‘information content quality’ dimension. However, no significant differences were found between students’ views and time spent on e-learning system as opposed to what was expected. Normally, it was expected that students spending more time on e-learning system would have more positive views. This may be due to having no e-learning experience before and adaptation difficulties to the new system.

It was also unearthed in the study that there were statistically significant differences according to the the type of the faculty of students. Vocational college students viewed e-learning more negatively than students in faculties of education, arts and sciences, engineering and administrative and economics in all dimensions of the scale. Vocational college students may have problems in accessing the e-learning system. However, it is not known whether this difference stemmed from access opportunities to the e-learning system since no data were collected about this. Also, vocational college students may not be ready to spend more time and effort to learn on their own or may not have self-study habits.

In order for an e-learning system to be successful and fruitful, there are a variety of factors contributing to its success, which was found out in this research. Internet infrastructure should be strong to avoid communication failure. The e-learning system should be interactive by chats and forums, accessible all the time and easy to navigate. Apart from this, the content should be enough, clear, up to date, interactive and enjoyable. Instructors’ teaching competence, personal characteristics, subject matter expertise and relationships with students are also vital for e-learning courses. Therefore, before launching an online course, instructors should be trained about how to conduct online teaching and learning, arouse learners’ interest and maintain student attendance and participation. In line with the results of the study, instructors should be friendly, proficient, accessible and quick to respond to students’ needs and concerns. These findings are in line with Baturay (2011)’s findings showing that sense of classroom community, technical problems, level of the Internet or computer self-efficacy, instructor’s quality of interaction and feedback, the content, the e-learning material might affect students’ satisfaction in online foreign language learning. Moreover, students should be motivated in an online course. An online instructor should have roles such as supporter, facilitator, advisor, co-learner, content expert, researcher, instructor, assessor, mentor, manager, designer and technologist (Yang & Cornelious, 2005; Yuksel, 2009). According to Selvi (2010)’s research findings, learning-teaching process, competencies of instructors, participants’ attention, online learning environment/technical infrastructure and time management affect motivation in the online courses. These factors should be taken into consideration by the instructors and university administration.

The study was conducted to investigate students’ views on language learning via e-learning. However, further research may include other stakeholders such as instructors. Foreign language instructors’ views and perceptions about e-learning are also worth investigating. Furthermore, the sample group of this research was comprised of freshmen students with elementary level of English. Thus, it can be recommended that further research is implemented with different study populations as well as different English proficiency levels.

As a result, the e-learning system mentioned in this research should be developed in order for students to have valuable e-learning experiences and benefit from e-learning more. Moreover, students should be trained to perform self-regulated learning and in turn improve e-learning efficiency.
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REFERENCES


INSTRUCTION DESIGN SYSTEM OF ALLAMA IQBAL OPEN UNIVERSITY: A VEHICLE FOR IMPROVEMENT OR MERE A SALOGON

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ABSTRACT

The main objective of this study was to ensure instructional quality, effectiveness, efficiency and enjoyment. Instructional design maximizes the value of the instructions for the learners. Instructional design include identifying instructional out-comes, developing instructional contents and established how instructional effectiveness will be evaluated. This study aimed to analyze the existing instructional design system of Allama Iqbal Open University, identify the possibilities of new innovations, to explore the gap between existing practices and opportunities of instructional design system and to suggest the strategies for improvement in instructional design system at Allama Iqbal Open University. The population of the study comprised 75 course writers, 25 course reviewers and 10 media producers at Allama Iqbal Open University. A sample of 100% was drawn. Questionnaires were used to collect the data. The results indicated that need assessment is conducted, courses are developed with standardized techniques, content are appropriate and placed in logical order. Creativity is maintained in course development process and courses are also provided on e-learning format. E-assessment techniques should be used and evaluation system is suitable to evaluate all components of the instructional design. Communication strategies should be up-dated and instructional design of Allama Iqbal Open University should be more innovative. Modern educational technology should be used and professional development opportunities are available for all stakeholders of the instructional design at Allama Iqbal Open University. The findings suggest that media laboratory may be established and to be launch innovative multimedia based education programs at Allama Iqbal Open University. Centre for Instructional Design may be developed for enhancement of delivery system. Creativity may be maintained in course production process and there is need to select appropriate media for transmission of courses. Instructional design of Allama Iqbal Open University may be modified to meet the future needs. E-learning and e-assessment techniques may be developed. Systematic and continuous research may be undertaken for future vision of the instructional design system by Allama Iqbal Open University.
Keywords: Distance education, instructional design, models, vehicle for improvement, innovations, instructional quality.

INTRODUCTION

Education is a basic need of any social, cultural and economic developmental plan. Education is a basic human right and nations plan their socio-economic development based upon well-educated masses. The fundamental purpose of education is to search the truth and develop the mental and physical qualities of man in such a manner that the probabilities of the humans may be comprehended Annick, and Brennen (2001). According to Edmonds (1994) that “the intrinsic human value of education is its ability to add meanings, values, knowledge , skills and competencies”. This value contains information’s, skills and experiences transmit through a mechanism. The instructional design is one and major amongst these mechanisms and components of education system. Instructional design describes the method concerned in systematic planning of instruction at the very basic stage Shambaugh (2006). It is the methodical growth of instructional stipulations by means of wisdom and instructional theory to make certain the eminence of training. Instructional design is an organized development of instructional strategies for using learning and instructional theories to insure the qualitative instruction. Parveen (2014) viewed that “instructional design is a comprehensive analysis of learning needs and objectives for the successful development of instructional system. Instructional design comprises upon the evolution of instructional activities and materials so also trial, test and evaluate the instructional and learner activities.

APPROACHES OF INSTRUCTIONAL DESIGN

Simonson, Smaldino, Albright, and Zvacek (2006) describe four approaches of instructional design as:

Linier- Designed Approach. This approach is based upon organization module which gives the liberty of transition to the learners, so they can go through from a series of tasks and readings in specific processions. Learning is organized in a sequence for obtaining educational objectives.

Branch-Designed Instruction. This branch gives more flexibility for accomplishing the tasks and readings. This draft is fundamentally linear regarding providing opportunities to learners for the further specific areas or to remove students’ backwardness of instructions towards remedial areas.

Hyper Content Design. Topics of hyper content designs can be studied randomly and in a non-sequential way. They states additionally that students within their framework and had a control over the studied topics and they can do this without the direct control of instructor. This type of concepts comprises upon text and multimedia elements like audio, video, pictures and graphics.

Learner Directed Design. Learner directed design gives liberty to students for ascertaining navigation of courses completely. Learners formulate their own instructional schemes and even their instructional design as well. It is reckoned as constructivist design model which completely supports learner compulsive objectives. However, the author warns the learner that design needs a worthy talented and lots of talents for achieving success Simonson, Smaldino, Albright and Zvacek (2006).
INSTRUCTIONAL DESIGN MODELS

The models of instructional design render the procedural framework for the system development of instruction. It comprises upon the components of instructional design process which included the determination of objectives and goals and the analysis of audience to be selected. It describes how the components of instructional strategies are incorporated to formulate a course of instruction Morphew (2000).

ADDIE Model. The model which perhaps used mostly for creating and delivery of the material of instruction is ADDIE Model. The stages of model are, to analyze learner characteristics, environment and the tasks which are to be learned. This model is helpful to design and develop the objectives of learning, select the instructional approach, to develop and create instructional or training materials, to implement, distribute and deliver the instructional materials and evaluation of achieved materials and the desired goals Morphew (2000). The steps of the models are planted by adopting generic approach system which itself bears a systematic nature. Formative evaluation is conducted for evaluating the value of all five steps separately and revisions is conducted wherever is needed for improvement. The outcome of the each step of this model is taken into consideration upon the subsequent phase. The rest of new models of instructional design are the variation of this model although their levels of complexity and specificity varied.

Instructional Development Learning System (IDLS) Model
IDLS model was primitively formulated and published by Peter in 1970 which comprises upon the components i.e. to design a task analysis, to develop criterion and performance measures, to develop interactive instructional materials and validation of the interactive instructional materials.

Dick and Carey System Approach Model
The Dick and Carey Systems Approach Model were primitively formulated by Walter Dick and Lou Carey and for the first time released for public in 1968 but later in 1978 it was published in the book of Walter Dick and Lou Carey entitled “The Systematic Design of Instruction”. The most revision of model was done in 2005. They both made a significant contribution in the field of design by making a system view of championing being in opposition of viewing instruction system which is based on the concept of isolated parts which is focalizing on the interrelatedness of contents, context, instruction and learning. Dick, and Carey (1990) view that “it is one of the leading model of today which is based upon behavioral approach of instruction. The elements of this model are the learners, instructors, materials, delivery systems, instructional activities, learning performance and work altogether about students”.

Objectives Activities Resource (OAR) Model
An instructional design model is designed for a specific context. It is used to deliver by a learning management system (LMS) courses of distance education at different levels of education. According to Smith and Ragan (1993) this model was designed to encounter four criterions:

- To maintain rigorous focus on the context of learning system.
- To create a simple graphical support and this alleviates communication among the originating stakeholders.
- To remain inclusive.
- To represent the clear order of operations in the developmental process of an online courses.
Morrison, Ross and Kemp Model
A well organized design process proposed by Ross, Kemp and Morrison (2001) model which comprises upon nine reciprocally connected steps. These steps include, identify problems of instructional design, to specify relevant goals to examine the characteristics of learner, identify the contents of subject and to analyze task oriented elements which are relevant of instructional goals, describe instructional objectives for learners, to arrange the contents in sequence within each unit to maintain the logical learning, plan the delivery of instructions, develop instruments for evaluation and selection of supportive learning activities resources.

Smith and Ragan’s Model
The model of Smith and Ragan (2004) is also comprised upon the systematic designing approach of instruction. It includes three stages which are: (a) analysis which is related with learners, learning context and tasks of learning. (b) strategy which includes organizational, management and delivery. (c) evaluation which covers formative evaluation, revisal and required alterations.

INSTRUCTIONAL DESIGN SYSTEM OF OPEN UNIVERSITIES
The distance universities of the world design and implement instructional design system, considering their demographic conditions and needs. The major universities are:

Instructional Design System at Open University of Sri-Linka
The Open University of Sri Lanka was established in 1980, as a first Open and Distance learning institute in Sri Lanka with an objective that the students may continue and pursue their studies through Open and Distance Learning (ODL) methods. Multimedia system is being used by the Open University of Sri Lanka for teaching and emphasis on the basic objective of the university. The students are assisted through various means that include printed texts, audios & videos, day schooling, discussions, labs, tutor clinics, field works, study trips of industry and internet. Constant evaluation and final examinations are primary elements of the study system at Open University of Sri Lanka. Study package is primarily consisted of printed course material. The improvement and development of the reading skills in the students is also important, students are provided other helping material regarding a course that include practical and study guide, audio and video materials as the needs and requirements of the students.

Instructional Design System at UK Open University
United Kingdom is considered the hub of education and learning of all fields. Therefore, to meet the international standards the open university utilizes a range of means for distance learning that include printed material, disc-based software, DVDs, TV programs based on the courses and broadcasts by the BBC, other audio and video materials. In-house and external academic contributors prepare these materials and open university students also use third-party licensed materials. Tutors or Associate Lecturers assist the students in most modules, they give feedback on the students’ work, and the students may meet them for the face-to-face tutorials and may be contacted on telephone or through internet i.e. Skype, Email etc. Open university offers several short courses of ten credits having no assigned tutor however online conferencing service known as Internet Forum is offered for advice and assistance through conferencing Moderators. Few courses at open university have compulsory day schools and are of a daylong sessions that a student have got to be present in so as to pass the course online accessed (2014).

Instructional Design System of Indira Gandhi National Open University (IGNOU) India
Indira Gandhi National Open University established in 1985 by an act of Parliament, has constantly endeavored to construct a broad knowledge based society through comprehensive teaching instructions and methods. It increases the Gross Enrollment Ratio (GER) through
high quality of teaching using the open and distance learning methods. It is serving the educational ambitions and objectives of more than 3 million students of India and other states with a network of 67 regional centers and 21 schools of studies. There are 29 overseas partner institutions and 2,667 learner support centers IGNOU online source, accessed (2014).

Indira Gandhi National Open University utilizes a range of latest technology and media in spreading the education. This reflects in the devised vision of the university having a focus on its objectives which states that Indira Gandhi National Open University is the National Resource Centre for Open and Distance Learning, with international recognition and presence shall provide seamless access to sustainable and learner-centric quality education, skill up-gradation and training to all by using innovative technologies and methodologies, ensuring convergence of existing systems for large-scale human resource development, promoting integrated national development and global understanding IGNOU online source, (2008).

**Instructional Design System of Allama Iqbal Open University**
The main objective of Allama Iqbal Open University establishment was to provide educational opportunities to people and to those who are not able to go away from jobs and homes. It has unlocked opportunities to get education the working class and access at the doorsteps for the females too Brief History of AIOU, online (2014). Allama Iqbal Open University has developed and possesses its own instructional design process. There are committees of courses at the departmental level to develop the courses and same nature of committees exists at faculty level, known as faculty board. The monetary decision of these committees is forward to the academic planning and development committee and the decisions concerning research and media is forwarded to research and technology committee. After due course the decision is sent to the academic and executive councils for final sanction and execution. The university is based upon distance education and uses multi-media approach. The most important parts of its instructional design are: self-learning printed text and supplementary material, broadcast on TV and Radio, seminar of instructions, course assignment, tutorial support and use of educational technology.

**Centre for Instructional Design of AIOU**
The Allama Iqbal Open University is a distance education body that provides variety of teaching from general to professional level of the people in the whole country. Instructional design of Allama Iqbal Open University is a methodical way to formulate course instructions for the students. In May 2011 the centre for instructional design was established with an objective to develop technology integrated instructions and evaluation approach, reconsider the course to mirror technology well-off environment and increasing media for web based instructional functions. To develop a high quality instructional material not contrary to standard and needs of local constraints is the main task of the centre. It also organizes training of media developers, tutors, academicians, course writers, scholars and researchers with reference to new developments of instructional design. Further, to formulate the policy guidelines and integration of print materials into technology based learning is the objective and function of the centre. The Allama Iqbal Open University instructional design system modifies along with modern technology based tools in order to facilitate distance learners in their environments Staff Report, on-line (2012).

**IMPLICATIONS OF THE INSTRUCTIONAL DESIGN**
Instructional design is the systematic specification of instructions. It proposes objectives, presentation of materials, activities, guidance, feedback and evaluation. It applies learning principles to decisions about contents, interactional methods, use of media and delivery system. The goal is to ensure instructional quality, effectiveness, efficiency and enjoyment.
The purpose of instructional design is to maximize the value of the instructions for the learners. The main purposes of the instructional design include identifying instructional outcomes, developing instructional contents and establishing how instructional effectiveness will be evaluated. Allama Iqbal Open University has its own instructional design system having important components of print material, allied material, tutorial support, assignments, e-learning, broadcast media and innovative multimedia approach of centre for instructional design. This study will be significant and beneficiary for the course writers, students, tutors, course reviewers, course editors and media producers or stakeholders of the instructional design system. They will be able to comprehend, reform, design and launched the innovative instructional design system for distance learners. The benefits and implications of instructional design are: development of quality in education, promote co-ordination activities in the system, makes accurate and efficient delivery system, improve innovative methodologies and enhanced evaluation activities.

**METHODOLOGY**

Proper methodology has to be selected to satisfy the information of any research study, suitable tools for data collection and analysis are chosen Mouton (2001). Keeping in view the nature of this study a descriptive i.e. survey form of research was used. It deals with the Instruction Design System of Allama Iqbal Open University: a vehicle of improvement or mere a salogon in organized and arranged manners.

**Instrument**

Questionnaire was used as a tool for data collection. Questionnaires in general consist of number of statements for the measurement of subject variables regarding the analysis of the Instruction Design System of Allama Iqbal Open University: a vehicle of improvement or mere a salogon. For this study these questionnaires were used.

1. Questionnaire for Course Writers of the AIOU.
2. Questionnaire for Course Reviewers of AIOU.
3. Questionnaire for Media Producers of the AIOU.

All statements of the questionnaires were closed ended, provided descriptions of five levels namely strongly agree, agree, uncertain, disagree and strongly disagree, so that quantitative judgment might be made. Respondents checked one of these levels which he/she thought to be most appropriate.

**Validity and Reliability of the Instrument**

Pre-test is one of the states which are carried out after designing the instruments. It is carried out to determine its effectiveness and problems. After initial construction of the questionnaires, editing was made. Questionnaire of course writers was presented to five experts for professional validation, questionnaire for course reviewers was served to three experts and questionnaire for media producers was presented to one expert. Although validity of a research tool is important, yet it is worthy to determine its reliability. Reliability refers to the consistency of research tool in data collection with accuracy Wallen and Fraenkel (2001). Similarly Mooren (2002) argues that “when items are used to form a scale they need to have internal consistency. Cronbach's Alpha is a tool for assessing the reliability of scales. It is a useful coefficient for assessing internal consistency. So the Cronbach Alpha was calculated to determine the internal consistency of the tools through SPSS Statistics Version 16. These questionnaires were amended in the light of the observations and suggestions.

After professional validation, the “instructions” were placed as “cover page” on each questionnaire. The statements of each questionnaire were typed in such a manner that statement should become clear and legible. Sufficient space was left for “marking” the respondents. After professionally up-dating questionnaires were administered for pilot
testing, the questionnaire for course writers was presented to three respondents, questionnaire for course reviewers was administered to two respondents, where as questionnaire for producers was presented to one producer. Their observations regarding content and language were accommodated before actual lunch.

Population
The population was comprised as Table 1.

Table 1
Population sample ratio

<table>
<thead>
<tr>
<th>S.No</th>
<th>Population Category</th>
<th>Population</th>
<th>Sample</th>
<th>%</th>
<th>Return</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course Writers at AIOU</td>
<td>75</td>
<td>75</td>
<td>100</td>
<td>63</td>
<td>84</td>
</tr>
<tr>
<td>2</td>
<td>Course Reviewers at AIOU</td>
<td>25</td>
<td>25</td>
<td>100</td>
<td>21</td>
<td>84</td>
</tr>
<tr>
<td>3</td>
<td>Media Producers at AIOU</td>
<td>10</td>
<td>10</td>
<td>100</td>
<td>10</td>
<td>100</td>
</tr>
</tbody>
</table>

Administration of Tool
The researcher personally and through pre-paid postage administered the instruments to the sample population. The filled questionnaires were collected back personally and through postal mail from the sample population. 63 questionnaires (84%) from course writers were received back, 21 questionnaire (84%) from course reviewers and 10 (100%) from media producers were received back.

Statistical Analysis of Data
Through SPSS Statistics Version 16 Percentage, Mean Score and Variance was determined.

(1) Percentage = \( \frac{\text{Obtained Responses}}{\text{Total Responses}} \times 100 \)

(2) Mean Score = \( \frac{5FSA+4FA+3FUNC+2FDA+1FSA}{N} \)

(The Mean Score could range from 1 to 5, the score 3 and above was taken as favorable).

(3) Variance = ?

FINDINGS AND DISCUSSION

Table 2
Responses of course writers

<table>
<thead>
<tr>
<th>S.NO</th>
<th>Statement</th>
<th>Mean Score</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Need assessment of the course is conducted before the course development.</td>
<td>3.5</td>
<td>1.35</td>
</tr>
<tr>
<td>02</td>
<td>Course team is selected, keeping their specialization.</td>
<td>3.7</td>
<td>1.54</td>
</tr>
<tr>
<td>03</td>
<td>Courses are developed with standardized techniques of instructional design.</td>
<td>3.6</td>
<td>1.70</td>
</tr>
<tr>
<td>04</td>
<td>Course contents are placed in logical order.</td>
<td>4.1</td>
<td>0.51</td>
</tr>
<tr>
<td>05</td>
<td>Creativity is maintained in course development process.</td>
<td>2.9</td>
<td>1.58</td>
</tr>
<tr>
<td>06</td>
<td>Courses are also provided on e-learning format.</td>
<td>2.7</td>
<td>1.70</td>
</tr>
<tr>
<td>07</td>
<td>E-assessment techniques should be used in the courses.</td>
<td>3.8</td>
<td>1.19</td>
</tr>
<tr>
<td>08</td>
<td>Evaluation system is suitable to evaluate all components of t instructional design.</td>
<td>2.6</td>
<td>1.48</td>
</tr>
<tr>
<td>09</td>
<td>Communication strategies should be up-dated for the courses.</td>
<td>3.6</td>
<td>1.62</td>
</tr>
</tbody>
</table>
Instructional design of AIOU should be more innovative. 4.2 0.6
Modern educational technology should be used for instructional design. 4.1 0.63
Professional development opportunities are available for all stakeholders of the instructional design at AIOU. 2.8 1.53

Table 2 indicates that the opinion of 58.7% respondents was favour of need assessment, 65% of respondents were of the view that course team is selected, keeping their specialization (Var = 1.54). Course writers (60.4%) agreed that courses are developed with standardized techniques of instructional design and course contents are placed in logical order (82.5%). Course Writers (Mean =2.9) did not favour that creativity is maintained in course development process and courses are also provided on e-learning format. Course writers 65.1% agreed that e-assessment techniques should be used in the courses. Variance 1.71 presented that communication strategies should be up-dated for the courses. Majority (85.7% respondents agreed that instructional design of AIOU should be more innovative (Var = 0.69). 79.3% respondents agreed that modern educational technology should be used for instructional design. Majority (47.6%) disagreed that professional development opportunities are available for all stakeholders of the instructional design at AIOU. (Var = 1.53)

Table 3
Responses of course reviewers

<table>
<thead>
<tr>
<th>S.NO</th>
<th>Statement</th>
<th>Mean Score</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Need assessment is carried-out for reviewing the courses.</td>
<td>3.7</td>
<td>0.92</td>
</tr>
<tr>
<td>02</td>
<td>Course objectives are clearly measureable.</td>
<td>3.8</td>
<td>0.57</td>
</tr>
<tr>
<td>03</td>
<td>All activities of the course design should be objective oriented.</td>
<td>4.0</td>
<td>0.91</td>
</tr>
<tr>
<td>04</td>
<td>Course reviewers are selected, keeping their specialization.</td>
<td>2.9</td>
<td>1.15</td>
</tr>
<tr>
<td>05</td>
<td>Courses are developed with standardized techniques of instructional design.</td>
<td>3.8</td>
<td>1.27</td>
</tr>
<tr>
<td>06</td>
<td>Contents of the courses are appropriate for learners need.</td>
<td>3.4</td>
<td>1.56</td>
</tr>
<tr>
<td>07</td>
<td>Course contents are placed in logical order.</td>
<td>3.9</td>
<td>0.95</td>
</tr>
<tr>
<td>08</td>
<td>Media support is provided in the courses.</td>
<td>3.1</td>
<td>1.22</td>
</tr>
<tr>
<td>09</td>
<td>Courses are also provided on e-learning format.</td>
<td>2.0</td>
<td>1.96</td>
</tr>
<tr>
<td>10</td>
<td>E-assessment techniques should be used in the courses.</td>
<td>3.5</td>
<td>1.46</td>
</tr>
<tr>
<td>11</td>
<td>Evaluation process is transparent at AIOU.</td>
<td>3.1</td>
<td>1.53</td>
</tr>
<tr>
<td>12</td>
<td>Communication skills of the learners should be developed by instructional design of AIOU.</td>
<td>4.3</td>
<td>2.35</td>
</tr>
<tr>
<td>13</td>
<td>Instructional design of AIOU should be more innovative.</td>
<td>4.1</td>
<td>0.82</td>
</tr>
<tr>
<td>14</td>
<td>The instructional design process of AIOU is based on distance education.</td>
<td>2.9</td>
<td>1.64</td>
</tr>
<tr>
<td>15</td>
<td>Resources are to be used to design advance instructional design model at AIOU.</td>
<td>3.8</td>
<td>1.67</td>
</tr>
<tr>
<td>16</td>
<td>Modern educational technology should be used for instructional design.</td>
<td>4.1</td>
<td>0.93</td>
</tr>
</tbody>
</table>

Table 3 shows that majority (71.4%) respondents agreed that need assessment is carried-out for reviewing the courses and course objectives are clearly measureable (Var = 0.57). All the (76.2%) Reviewers agreed that all activities of the course design should be objective
oriented (Mean = 4.0). Majority (47.7%) respondents remained uncertain that course reviewers are selected, keeping their specialization. Majority (71.5%) agreed that courses are developed with standardized techniques of instructional design. Majority (52.4%) were of the view that contents of the courses are appropriate for learners need. 71.5% respondents agreed that course contents are placed in logical order (Var = 0.95). Majority (42.8%) agreed that media support is provided in the courses. Reviewers (61.9%) disagreed that courses are also provided on e-learning format (Mean = 2.0). Majority (57.1%) respondents agreed that e-assessment techniques should be used in the courses. Majority (61.9%) respondents agreed that communication skills of the learners should be developed. All the 81% respondents agreed that instructional design of AIOU should be more innovative. Majority (66.7%) agreed that resources are to be used to design advance instructional design model. 81% respondents were agreed that modern educational technology should be used for instructional design (Mean = 4.1).

Table 4

<table>
<thead>
<tr>
<th>S.NO</th>
<th>Statement</th>
<th>Mean Score</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Need assessment is carried-out for the production process.</td>
<td>4.1</td>
<td>0.33</td>
</tr>
<tr>
<td>02</td>
<td>Course objectives of the AIOU courses reflect educational needs of the learners.</td>
<td>4.0</td>
<td>0.89</td>
</tr>
<tr>
<td>03</td>
<td>Producers have a systematic approach in their production activities.</td>
<td>3.6</td>
<td>1.6</td>
</tr>
<tr>
<td>04</td>
<td>Learners based activities are provided in the course production.</td>
<td>3.6</td>
<td>2.05</td>
</tr>
<tr>
<td>05</td>
<td>Creativity is maintained in course production process.</td>
<td>3.9</td>
<td>1.44</td>
</tr>
<tr>
<td>06</td>
<td>The recording voice matched with script requirements.</td>
<td>4.1</td>
<td>0.99</td>
</tr>
<tr>
<td>07</td>
<td>Words and illustration are blended in integrated manners.</td>
<td>4.0</td>
<td>0.67</td>
</tr>
<tr>
<td>08</td>
<td>Appropriate media is selected for transmission of courses.</td>
<td>4.2</td>
<td>0.18</td>
</tr>
<tr>
<td>09</td>
<td>Modern educational technology is helpful in developing instructional design.</td>
<td>4.3</td>
<td>1.57</td>
</tr>
<tr>
<td>10</td>
<td>Courses are developed according to learner’s level.</td>
<td>3.8</td>
<td>1.74</td>
</tr>
<tr>
<td>11</td>
<td>Communication skills are developed in the learners through AIOU courses.</td>
<td>3.8</td>
<td>2.18</td>
</tr>
<tr>
<td>12</td>
<td>Producers ensure that written scripts are according with the specific objectives.</td>
<td>3.9</td>
<td>0.55</td>
</tr>
<tr>
<td>13</td>
<td>Audio-visual material is supporting the course material.</td>
<td>3.8</td>
<td>1.52</td>
</tr>
<tr>
<td>14</td>
<td>Modern evolution techniques should be used in course production process.</td>
<td>3.5</td>
<td>0.95</td>
</tr>
<tr>
<td>15</td>
<td>The instructional design process of AIOU is based on distance education.</td>
<td>4.0</td>
<td>0.67</td>
</tr>
<tr>
<td>16</td>
<td>Evaluation system of AIOU is suitable to evaluate instructional design system.</td>
<td>3.1</td>
<td>0.99</td>
</tr>
</tbody>
</table>

Table 4 presents that majority (90%) respondents were agreed that need assessment is carried-out and 80% agreed that course objectives reflect educational needs of the learners. 70% were agreed that producers have a systematic approach in their production activities. Majority 80% agreed that creativity is maintained in course production process. Media producers 80% were in favour that the recording voice matched with script requirements (Mean = 4.1). 90% respondents were agreed that words and illustration are blended in integrated manners. All 100% agreed that appropriate media is selected for transmission of
courses. Media Producer 90% were agreed that modern educational technology is helpful in developing instructional design (Mean = 4.3). 60% were agreed that communication skills are developed in the learners through AIOU courses. Majority 90% were agreed that Producers ensure that written scripts are according with the specific objectives. It was 70% opinion in the favour that audio-visual material is supporting the course material. Majority 60% agreed that modern evolution techniques should be used in course production process. It was a general view that evaluation system of AIOU is suitable to evaluate instructional design system.

CONCLUSIONS OF THE STUDY

1. Need assessment of the course is conducted before the course development. Courses are developed with standardized techniques of instructional design and contents are placed in logical order.
2. Creativity is maintained in course development process and courses are also provided on e-learning format. E-assessment techniques should be used in the courses.
3. Communication strategies should be up-dated for the courses and instructional design of AIOU should be more innovative.
4. Modern educational technology should be used for instructional design and professional development opportunities are available for all stakeholders of the instructional design at AIOU.
5. Media support is provided in the courses. The instructional design process of AIOU is based on distance education and resources are to be used to design advance instructional design model at AIOU.
6. Learners based activities are provided in the course production. Communication skills are developed in the learners through AIOU courses.

RECOMMENDATIONS

1. Media laboratory may be established at AIOU for development and launching of innovative multimedia based education programs.
2. Centre for Instructional Design may be developed for enhancement of delivery system at AIOU.
3. Creativity may be maintained in course production process at AIOU.
4. There is need to select appropriate media for transmission of courses.
5. It was concluded in the study that instructional design of AIOU may be modified to meet the future needs.
6. E-learning and e-assessment techniques may be developed at AIOU.
7. Systematic and continuous research may be undertaken for future vision of the instructional design system by AIOU.

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SENSE OF CLASSROOM COMMUNITY AND TEAM DEVELOPMENT PROCESS IN ONLINE LEARNING

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ABSTRACT

The purpose of this study is to determine whether there is a relationship between Turkish online learners’ sense of classroom community, perceptions of success in team development process and their preferences of studying in teams. A survey instrument included the Sense of Classroom Community Scale, Tuckman’s Teamwork Questionnaire and some other items were used to collect data. The study has shown that there is a medium level relationship between online learners’ sense of community and their perceptions of success in team development process. In other words, the study suggests that sense of classroom community can be used as a predictor of success in teamwork and vice versa. It was also observed that each stage of the team development process has an influence on the following one; thus, when a problem occurred in a stage, it usually continued in the following stages. Analyses, additionally, revealed that the majority of the problems occurred in the forming stage, the first stage of the team development process.

Key Words: Online Learning, Sense of Classroom Community, Team Development Process, Teamwork, Learners Teamwork Preferences

INTRODUCTION

The recent developments in information and communication technologies provided tremendous opportunities for the open and distance learning providers. For instance, for years the interaction among students as well as between students and instructors, and, related to these interactions, the feeling of isolation have been considered as the shortages of this form of learning and teaching (Flood 2002, Forrester 2000; Parker, 1999). Additionally, the shortage of interaction was considered as one of the main reasons of the high dropout rate in open and distance learning (Berge & Huang, 2004). In fact, the experts agree that interaction plays an important role in learning processes in both distance and face-to-face educational environments (Law et all, 2011). Learner engagement or interaction is an essential component for deeper learning and also one of the major predictors of success in online learning (Hrastinski, 2009).

Online communication technologies, on the other hand, have helped the providers overcome this shortage via online learning. They have been able to secure a better degree of interaction in various forms (e.g. synchronous and asynchronous communications) (Shannon, Jason, & Helen, 2008). However, providing opportunities to communicate does not mean that the students and the instructors will not feel the isolation.

According to the experts (Rovai, 2002a, 2002b; Misanchuk & Anderson, 2001), one way of securing a meaningful and beneficial interaction that would diminish the feeling of isolation is to the development of the feeling of belonging a community among learners. Meanwhile, Biasutti (2011), Nam and Zellner (2011) stated that the sense of belonging to
a community and working in a community may also help learners do better in their studies and develop their social and interpersonal skills along with decreasing the sense of isolation. Previous studies on sense of community (Bruffee, 1993; Dede, 1996; Wellman, 1999; Wellman & Gulia, 1999) have revealed that there is a positive relationship between the sense of community and information sharing and flow among learners, creating a common commitment to the achievement of goals, satisfaction due to cooperation and teamwork. It was also expressed that the learners’ perceptions of sense of community in online classes directly affected learning outputs and that it has a significant effect on the success or failure of learners (Harasim, 2002; Hiltz & Wellman, 1997; Gunawardena & Zittle, 1997; Palloff & Pratt, 1999). Additionally, learners with lower sense of community tended to dropout their studies more easily due to the fact that learners mostly feel lonely during their studies (Haythornthwaite, 2000; McMillan & Chavis, 1986; Morgan & Tam, 1999). Furthermore, due to the physical distance, learners in online environments develop low level of sense of belonging to a community and then they often choose to drop-out their studies (Gökçearslan, 2013). On the other hand, those learners with higher sense of community have shown more persistence in participation and completion of the learning activities than those feeling alienated and lonely (Tinto, 1993). Therefore, in order to increase the quality of learning experience in online learning, how to diminish the feeling of isolation, and create a learning environment that promotes learners active participation and interaction are among the most crucial points that have to be taken into consideration while designing these environments (Kanuka, 2011; Abrami, et al, 2011).

This study focuses on Alfred Rovai’s conception of the sense of classroom community construct. According to Rovai (2002a; 2002b; 2001), there must be a feeling of connectedness and common learning expectations among the members in order for a strong sense of community among learners in an online class. For a strong feeling of connectedness, there need to be cohesion, trust, interdependence and team spirit among learners. On the other hand, the members in an online community can achieve their common learning goals and expectations through meaningful interactions.

**Connectedness**: Rovai (2002) considered the feeling of connectedness as a requirement of sense of community. The members in a community must first have a team spirit, harmony and interdependence. The formation of team spirit in learners and their sense of community depend on the interactions among team members, having common expectations, and the trust to be established between them (Gibbs, 1995). Lack of trust between community members may reduce the harmony and the desire for interdependence, thus negatively affecting the desire to interact, as it will render it difficult for them to rely on each other. In contract, the mutual trust, harmony, interdependence and respect among the members of the community will increase the level of interaction, thus positively affecting the individual’s sense of community (Preece, 2000).

**Learning**: Literature has well documented that success in learning in online communities heavily depends on the learners’ participation to learning activities and interactions occur among them. In other words, community members can only achieve their learning goals and expectations by interacting with each other and actively participating in learning activities (Berge, 1999; Boettcher & Conrad, 2004; Flottemesch, 2000; Jiang, 1999; Misanchuk & Anderson, 2001; Palloff & Pratt, 1999). Furthermore, according to Jung and Rha (2000), high level of interaction among online learners and the formation of a social connectedness among them are considered as the significant factors that may increase success and motivation. Similarly Dawson et al. (2006) found out a positive relationship between online learners’ level of interactions among themselves as well as with their instructors and their sense of community levels in an online learning community. In sum, literature has shown a positive relationship between interaction and sense of community.

Another issue regarding interaction in online learning is about team development process for an effective teamwork. An educational psychologist, Bruce Tuckman developed a five-
stage model for an effective team development, which heavily depends on interaction and is used widely in online learning environments (Gunawardena et al., 2001). According to this model, the stages of team development process are defined as forming, storming, norming, performing, and adjourning. In the forming stage, team members get to know each other and get acquainted with what the general aim of the gathering and what their basic responsibilities in the team are. The team leader must clearly state the goals of the teamwork and direct the members towards these goals to building a team spirit. In storming stage, the team members collaborate to establish a consensus on how to overcome the problems they encounter. Storming is a stage in which intense conflicts may be encountered and separation may occur if the bonds keeping the team together are not strong enough. If a consensus cannot be established in this stage, the motivation of the team members most probably decline and the team may have hard time to achieve the goals and to move on to the next stage. The duty of the team leader at this stage is to ensure that team members with different opinions and ideas on what to do can settle the issue without any conflict. If the team cannot handle the conflict among members at this stage, the morale and motivation of team members and give the team a hard time to achieve the targeted goals and to move on to the next stage. Norming is the stage in which team accepts the team rules necessary to ensure collaboration and arrives at a consensus on how to share information, settle disputes and on the tools and the processes they will use in order to reach targeted goals. At this stage, the goals of the team are of top priority rather than individual goals. The members of the team start to trust, help each other and build a more open communication. In performing, the members focus on the goal as a team. They make decisions and solve their problems quickly and effectively. In case they have a disagreement, the members settle the conflicts in a way to produce positive results without disrupting the process. A common vision is formed and individuals reach an agreement with different points of views. At this stage, individual decisions and team decision coincide. The members have an advanced sense of responsibility towards each other. The main task of the team leader is to facilitate the interaction among team members and try to solve problems as they emerge. In the final stage, adjourning, the team has already reached the targeted goals and has strong bonds among members. The leader must provide positive feedback on the performance of the team.

In quite a number of online courses and programs that required teamwork faced failure due to shortage of meaningful interactions. For instance, the failure to build trust among team members, to communicate, to use time effectively, to form harmony among members (Kitchen & McDougall, 1999; Lipnack & Stamps, 2000; Robey et al., 2000), as well as reluctance to participate in activities, inability to plan effectively, experiencing personal conflicts (Johnson et al., 2002), and similar ones in teamwork can easily be correlated with the interaction.

Since, the literature, as summarized above, reveals interaction among learners as the common success factor for both sense of community and team development process, one can infer that there is a positive relationship between these two constructs. However, it was interesting to notice that no study has ever been directly focused on investigating this relationship. Moreover, the literature regarding sense of community and teamwork in online learning environments heavily rely on studies conducted in western cultures. Studies regarding impact of culture and context on human behaviors and learning (e.g., Le Boterf, 1994; McIsaac, 2002; Pepitone & Triandis, 1987; Yehuda & Sharon, 1987) may lead the question ‘can we apply the results of the studies conducted in a culture (e.g. the States) into another one (e.g. Turkey)?’ While culture as the way of doing thing is guided by the set of attitudes, norms, values, beliefs and behaviors of people (Matsumoto, 1996), the answer of the above question is presumably ‘NO’.

So, no study investigating the relationship between Turkish online learners’ perceptions of sense of community and of success in team development process has been observed in the literature. In fact, literature does not include enough number of studies that examine
whether online learners’ perceptions of sense of community can be used as a predictor of success in team development.

**RPOSE AND RESEARCH QUESTIONS**

This study was intended to investigate the relationships between Turkish online learners’ perceptions of sense of community, of success in team development process and their preferences of studying in teams in a completely online program, the Information Management (IM) Associate Degree Program of Anadolu University, Turkey. It mainly concentrated on whether the online learners’ sense of community can be used as a predictor of success in team development process. Within the framework of this purpose, the answers of the following research questions were sought:

1. What are the online learners’ perceptions of sense of classroom community and of success in the team development process?
2. Is there a relationship between the online learners’ perceptions of sense of community and of success in the team development process?
3. What are the preferences and opinions of the online learners on teamwork and their recommendations on how to perform teamwork more effectively?
4. Is there a relationship between the online learners’ preferences of studying in teams and their perceptions of sense of community, and of success in the team development process?

**METHODOLOGY**

The present study is a descriptive quantitative (survey) study that intends to examine the relationship between Turkish online learners’ perceptions of sense of community and of success in team development process. Although it is mainly a quantitative study, some qualitative data were collected to get a better understanding of the phenomenon via open-ended questions.

**Context**

The study was conducted in the Information Management (IM) Associate Degree Program of Anadolu University, which is a completely online, two-years long program. The theme of the first year is titled as “Business Experience” while the second year is “teamwork”. During the second year, the students have to work in teams to solve the real-life like institutional information management problems by using modern software in each course. Each team creates its own portal where members of teams work collaboratively to complete assignments. At the beginning of the second year, the students are divided into teams of 5-6. The teams are formed according to their grades in the centralized university entrance exam and their GPA in previous year courses. Usually it is intended to form heterogeneous teams rather than homogeneous. Each team has a supervisor who is a graduate assistant in the university. These supervisors serve as a help-desk on teamwork assignments and as the evaluator of the assignments the teams are required to complete. Also a guideline document, entitled as *General Guidelines for the Team Assignments* that explain how to work in teams and the nature of team assignments, is provided to the teams.

The teams also learn their assignments, instructions, and deadlines at the beginning of the semester. They are encouraged to decide the roles and responsibilities for each member in each assignment except the leadership. Each teamwork assignment requires a team leader and each member has to take this role in different assignments. The team leaders are responsible for monitoring the assignment process and ensuring that each member completes the task s/he assigned according to the instructions provided.

The team members are expected to be in an intensive communication with each other during the assignments via the synchronous and asynchronous online communication
tools as well as sections of the team-Web-site. For each team a separate Web site, for interaction and sharing resources and artifacts created during the assignments, is provided. The teams usually complete each assignment in a week, and submit with the team process reports as well as individual self-assessments. The supervisors evaluate the assignments and provide grades for each team as well as each student.

Participants
The study was conducted with the participation of 118 second-year students in IM Program of Anadolu University. The instrument was actually sent to all 249 students but only 118 (47.38% return rate) responded voluntarily. As can be observed in Table 1, the male students (58.5%) responded the instrument more than females. Also the majority of the learners (76.2%) is employed and has quite a number year of experience in the use of Internet (69.5%).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>49</td>
<td>41.5</td>
</tr>
<tr>
<td>Male</td>
<td>69</td>
<td>58.5</td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>90</td>
<td>76.2</td>
</tr>
<tr>
<td>Unemployed</td>
<td>28</td>
<td>23.8</td>
</tr>
<tr>
<td>Internet Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5 years</td>
<td>36</td>
<td>3.5</td>
</tr>
<tr>
<td>6-10 years</td>
<td>82</td>
<td>69.5</td>
</tr>
</tbody>
</table>

Instrument
A survey instrument was used to collect data in this study. The survey was composed of three main sections. The first section included the two scales: Clark’s Teamwork Questionnaire and Rovai’s Classroom Community Scale. Clark (1997) developed the Teamwork Questionnaire based on the Tuckman’s team development process. Later Gunawardena and her colleagues (2001) have revised this questionnaire (α=.91). The revised version included 27 items among which four items was intended to determine the learner attitudes in forming stage (α=.52), five in storming stage (α=.45), seven items in norming stage (α=.60), the remaining seven items in performing (α=.84), and four items in adjourning stage (α=.47). On the other hand, Rovai’s Classroom Community Scale was used to determine the students’ perceptions of the sense of community (α=.93). The first ten items of this scale is related to the sense of connectedness (α=.92) covering integrity, liveliness, mutual interdependence and trust in the team. The other ten items reflect the sub-dimension of learning (α=.87) where the interaction within the community and, in connection to it, learning goals and expectations are evaluated.

The second section of the instrument consisted of four items concerning the participants’ satisfaction from the teamwork. In this section, also, four open-ended questions were also provided to collect data about the participants’ preferences of learning (individually or in teams), and their opinions and recommendations regarding to the IM Program.

The final section covered several questions regarding the participants some characteristics, such as gender, employment and the Internet experience.
Procedure
After the translations of the scales, they were shared with a panel of five experts in the fields of scientific research methodology, online learning, educational technology and communications. The items on the scales were revised according to the recommendations of the experts and then a small group of students (eight students) who share the same characteristics as the participants of the study were asked to examine the scales. After the all the reviews the instrument was finalized as an online survey including total 51 close-ended items allowed the participants chose their agreement level with the statements in the items with a range of 0 to 4 (0= strongly disagree, 4=strongly agree). It was published on the IM Program Web site during 30 days and the students allowed completing it in multiple logins. After the data collection, t-tests and correlations as well as descriptive statistics were used to analyze the data.

RESULTS

Reporting of the results was organized into 4 sections according to the research questions indicated above.

Online Learnerse’ Sense of Classroom Community and Success in Team Development
As mentioned above, Rovai’s the Sense of Classroom Community scale was used to identify the perceptions of the online learners’ sense of community levels. As can be observed in Table 2, the online learners’ level of sense of classroom community is lower (X=1.98) than the average. Especially, the online learners averaged less in the learning sub-dimension (X=1.93) than the connectedness (X=2.03). It seems that the program did fail to build a good sense of classroom community among the learners.

<table>
<thead>
<tr>
<th>Sub-Dimensions</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectedness</td>
<td>118</td>
<td>2.03</td>
<td>.897</td>
<td>89.5</td>
</tr>
<tr>
<td>Learning</td>
<td>118</td>
<td>1.93</td>
<td>.725</td>
<td>76</td>
</tr>
</tbody>
</table>

Table 3 reveals that the online learners level of perceptions of success in the team development process during their project assignments is in general below (X=1.32) than average. This can be interpreted as that the IM Program did not help the learners establish good teamwork. The Alpha scores on the other hand showed that the scale used in this study was a bit problematic in terms of internal consistency in the forming (α=.32) and the storming (α=.55) stages. A similar result was observed in a previous study, conducted by Gunawardena et al. (2001).

<table>
<thead>
<tr>
<th>Stages</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forming</td>
<td>118</td>
<td>1.82</td>
<td>.719</td>
<td>32</td>
</tr>
<tr>
<td>Storming</td>
<td>118</td>
<td>1.63</td>
<td>.744</td>
<td>55</td>
</tr>
<tr>
<td>Norming</td>
<td>118</td>
<td>0.88</td>
<td>.709</td>
<td>77</td>
</tr>
<tr>
<td>Performing</td>
<td>118</td>
<td>0.96</td>
<td>.802</td>
<td>85</td>
</tr>
<tr>
<td>Adjourning</td>
<td>118</td>
<td>1.35</td>
<td>.946</td>
<td>76</td>
</tr>
</tbody>
</table>
Furthermore, although it was not intended, a series of multivariate analyses has additionally been conducted to find the answer for whether or not gender, the Internet experience and employment status of the learners caused and significant difference in the online learners’ perceptions of sense of community and of success in the team. The analyses have shown no significant difference at all.

**Relationship between the Online Learners’ Perceptions of Sense of Classroom Community and of Success in Team Development**

The second research question of the study intended to examine the relationship between the online learners’ perceptions of sense of classroom community and success in team development. As a result of the Pearson correlation analysis, a positive significant relationship was observed ($p<0.01 \ r=0.27$). However, the strength of this relationship was weak. On the other hand, as can be drawn from the Table 4, significant relationships were observed between the sub-dimensions of the scales. The strongest relationship was identified between in the norming and the performing ($0.785$) stages of the team development scale. In addition, the interactions between in the storming and the norming ($0.636$) and between in the performing and the adjourning ($0.663$) were noticeable stronger than others.

**Online Learners’ Preferences about Teamwork**

The survey instrument asked the learners indicate their preferences of studying in teams or individually in online learning environments in general. The results uncovered that the online learners in Turkey ($X=2.69, SD=1.34$) generally prefer individual study rather than the teamwork. Since the education system including primary, secondary and higher education in Turkey is quite competitive and individualistic due to the centralized test-based structure, this result can be considered as consistent. After having indicated their preferences, the students were also asked to state the reasons concerning their preferences. Table 5 shows the online learners’ preferences. Although the reasons are quite disperse (also the standard deviation scores present this disperse structure), a big majority of the learners emphasized the communication problems as a rational for their preference of studying alone. Another frequently identified reason is about each member's individual responsibility of fulfilling the duties assigned. It seems that the learners have not had a compelling teamwork experience in which each member completes their duties on time, learn from each other, and team achieves its goals successfully. On the other hand, ‘learning in teams better’ has been indicated as a major reason for preferring teamwork to individual study by a number of learners.

**Table 4**

<table>
<thead>
<tr>
<th>Sense of Community (r)</th>
<th>Team development and process (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Learning</td>
</tr>
<tr>
<td>Learning</td>
<td>.598**</td>
</tr>
<tr>
<td>Connectedness</td>
<td>.598**</td>
</tr>
<tr>
<td>Forming</td>
<td>-.285**</td>
</tr>
<tr>
<td>Storming</td>
<td>.002</td>
</tr>
<tr>
<td>Norming</td>
<td>.030</td>
</tr>
<tr>
<td>Performing</td>
<td>.104</td>
</tr>
<tr>
<td>Adjourning</td>
<td>.192*</td>
</tr>
</tbody>
</table>

** Correlation is significant at the .01 level (2-tailed).  * Correlation is significant at the .05 level (2-tailed).
Table 5
Reasons for Teamwork or Individual Study

<table>
<thead>
<tr>
<th>Preference and the reasons</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I prefer individual study because</strong></td>
<td></td>
</tr>
<tr>
<td>1 It is hard to communicate with team members</td>
<td>41</td>
</tr>
<tr>
<td>2 It is difficult for members to meet together to complete the team assignments</td>
<td>27</td>
</tr>
<tr>
<td>3 Team members do not fulfill their obligations in doing assignments</td>
<td>24</td>
</tr>
<tr>
<td>4 I learn better individually</td>
<td>17</td>
</tr>
<tr>
<td>5 I am only responsible for myself in individual study</td>
<td>9</td>
</tr>
<tr>
<td>6 We cannot select team members ourselves</td>
<td>5</td>
</tr>
<tr>
<td>7 I think individual evaluation is more accurate</td>
<td>4</td>
</tr>
<tr>
<td>8 The assignments are not delivered on time because the team leader does not make the distribution of tasks on time.</td>
<td>4</td>
</tr>
<tr>
<td>9 Teamwork are not suitable for online environment</td>
<td>2</td>
</tr>
<tr>
<td><strong>I prefer team work because</strong></td>
<td></td>
</tr>
<tr>
<td>1 I learn better with team work</td>
<td>9</td>
</tr>
<tr>
<td>2 Team work lets you share the responsibilities</td>
<td>5</td>
</tr>
<tr>
<td>3 Business life requires team work</td>
<td>3</td>
</tr>
<tr>
<td>4 Teamwork improves our skills of socializing and taking responsibilities, enhances our self-confidence.</td>
<td>2</td>
</tr>
<tr>
<td><strong>I prefer both types because</strong></td>
<td></td>
</tr>
<tr>
<td>1 I think both are helpful</td>
<td>10</td>
</tr>
<tr>
<td>2 The content of the course requires both</td>
<td>1</td>
</tr>
</tbody>
</table>

Moreover, the survey instrument included another question about the learners’ experiences and opinions on the teamwork assignments provided as the course requirement in IM Program. As can be seen in Table 6 and 7, the results are quite consistent with the answers given the previous question. For instance, it clearly seems that, in some teams, several members failed to complete or were late to complete their duties. They had also some communication problems. Additionally, a big majority complained about the team formation process and indicated that teamwork was not appropriate for all the learners, especially for those who had to deal with job-related tasks while they tried to interact with team members. These were the main negative experiences and opinions of the learners about teamwork required in their courses.

Table 6
Negative Experiences and Opinions of the Learners about Teamwork

<table>
<thead>
<tr>
<th>Preference and the reasons</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Team members fail to fulfill their obligations</td>
<td>49</td>
</tr>
<tr>
<td>2 Choices of team members are wrong</td>
<td>37</td>
</tr>
<tr>
<td>3 Team work is not suitable for employed learners</td>
<td>20</td>
</tr>
<tr>
<td>4 I prefer individual work</td>
<td>14</td>
</tr>
<tr>
<td>5 It is difficult for team members to be online all at the same time</td>
<td>11</td>
</tr>
<tr>
<td>6 We cannot receive consultancy assistance in case of a problem</td>
<td>7</td>
</tr>
<tr>
<td>7 There is a lack of communication among team members</td>
<td>7</td>
</tr>
<tr>
<td>8 I think that team evaluation is not fair</td>
<td>5</td>
</tr>
<tr>
<td>9 The team leader cannot lead the team well</td>
<td>5</td>
</tr>
<tr>
<td>10 Assignments are not in parallel with real life applications</td>
<td>2</td>
</tr>
<tr>
<td>11 Teams cannot be controlled after they are formed</td>
<td>1</td>
</tr>
</tbody>
</table>
On the other hand, Table 7 shows the main positive remarks the participant online learners expressed. Quite a number of them were in favor of the teamwork assignments as means to learn better. A few also emphasized the socialization and interaction functions of the teamwork.

Table 7
Positive Experiences and Opinions of the Learners about Teamwork

<table>
<thead>
<tr>
<th>Preference and the reasons</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Content of the course requires teamwork for a common goal</td>
<td>17</td>
</tr>
<tr>
<td>2 It prepares us for business life</td>
<td>6</td>
</tr>
<tr>
<td>3 A very efficient learning environment with a good team</td>
<td>5</td>
</tr>
<tr>
<td>4 It helps us learn about new ideas</td>
<td>4</td>
</tr>
<tr>
<td>5 It improves our communication skills</td>
<td>4</td>
</tr>
<tr>
<td>6 It helps us socialize</td>
<td>4</td>
</tr>
</tbody>
</table>

The participant online learners were also asked to indicate their recommendations for improving the teamwork in the IM Courses. Table 8 summarized their responses. These recommendations can be classified into three major themes: team formation, leadership and team spirit. As can be drawn from the table, quite a number of the learners preferred choosing their own teams (item #3), working with the team members who residence in closer areas (item #9) and equal opportunity to be the team member (item #4). Furthermore, the learners also focused on effective leadership. For instance, the learners stated the need for the team leaders’ constant or regular guidance and encouragement for each member to fulfill his/her duties on time (item #2). A shared team spirit was also another major theme drawn from the learners’ comments. One of the most common responses was about fulfillment of the duties on time by each member of the team (item #1). Also, sharing a common goal and understanding for team assignments, regular meetings including face-to-face gathering, equal sharing of the team responsibilities were among the other comments often expressed by the participant learners.

Table 8
Online Learners Recommendations for Improving the Teamwork in the IM Program

<table>
<thead>
<tr>
<th>Comments (Recommendations)</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Team members must fulfill their obligations</td>
<td>27</td>
</tr>
<tr>
<td>2 Team leader must check whether the team members are working in</td>
<td>22</td>
</tr>
<tr>
<td>harmony in the process</td>
<td></td>
</tr>
<tr>
<td>3 Each must be able to select his/her team to work with</td>
<td>15</td>
</tr>
<tr>
<td>4 The team leader must be elected by the system through a draw in a</td>
<td>11</td>
</tr>
<tr>
<td>manner to give equal chance to everyone.</td>
<td></td>
</tr>
<tr>
<td>5 The system must allow team members to meet instantly</td>
<td>9</td>
</tr>
<tr>
<td>6 The team must have a support service accessible to any time</td>
<td>9</td>
</tr>
<tr>
<td>7 Tasks of team members must be distributed equally by the team</td>
<td>7</td>
</tr>
<tr>
<td>leader</td>
<td></td>
</tr>
<tr>
<td>8 Team leader, team members and required tasks must be announced to</td>
<td>7</td>
</tr>
<tr>
<td>the students beforehand by the system</td>
<td></td>
</tr>
<tr>
<td>9 It must be given particular attention to have those living in the</td>
<td>5</td>
</tr>
<tr>
<td>same city get together</td>
<td></td>
</tr>
<tr>
<td>10 Team members must have a team spirit</td>
<td>4</td>
</tr>
<tr>
<td>11 It must be given particular attention to have individuals with</td>
<td>4</td>
</tr>
<tr>
<td>similar interest and knowledge in the same team</td>
<td></td>
</tr>
<tr>
<td>12 Time given for assignments must be longer</td>
<td>3</td>
</tr>
<tr>
<td>13 Assessments must be both for the team and for the individual</td>
<td>3</td>
</tr>
<tr>
<td>14 Team members must be brought together face to face</td>
<td>3</td>
</tr>
</tbody>
</table>
Relationship between the Online Learners’ Preference of Studying in a Team and their Perceptions of Sense of Classroom Community and Success in Team Development

In the study, the relationship between the online learners’ preferences to study in a team, and their perceptions of sense of classroom community and success in team development process was also examined. A correlational analysis was performed for this investigation and Table 9 reveals the results. As can be observed in the table, there is relationship between learners’ preferences of studying in a team and the both sub-dimensions (learning and connectedness) of the sense of classroom community. However, the relationship was stronger between teamwork and connectedness. In other words, those online learners who have high level of teamwork preference felt more connectedness in their courses then others.

A similar result was witnessed with the sub-dimensions of the team development process except the forming stage. No significant relationship was observed between the learners’ preference of studying in teams and their perceptions of success in forming stage of the team development process. This result can be related to that forming is the first stage and learners usually cannot get enough experience in teamwork. On the other hand, the relationships were especially stronger between teamwork preference and norming as well as adjourning stages of the team development process. So, those online learners who have high teamwork preference felt that they were more successful in norming, performing and adjourning stages of the team development process.

Table 9

<table>
<thead>
<tr>
<th>Sense of Classroom Community</th>
<th>Team Development Process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Learning</td>
</tr>
<tr>
<td>Teamwork Preference</td>
<td>.223*</td>
</tr>
</tbody>
</table>

** Correlation is significant at the .01 level (2-tailed). * Correlation is significant at the .05 level (2-tailed).

Along with the positive relationships between these variables, the study uncovered interesting results concerning the team assignments of the IM Program. This section reports these findings focusing on the stages of the team development process, and what happened in each stage concerning the sense of classroom community in the IM Program.

First of all, it seems that all the reasons the participant online learners indicated about why they did not prefer to study in teams as well as the recommendations they stated to improve the team assignments in the IM Program are related to forming stage of the team development process. In the forming stage, roles and responsibilities of team members must be identified and the foundation rules must be set for building a sense of community in a team. The learners in the study stated that the majority of the times the team leaders failed to distribute the roles and responsibilities on time. One of the learners clearly indicated that "... when the team leader does not make the distribution tasks on time, other team members have little time to deliver their assignments". The learners indicated that, in order to overcome the problems that emerge at this stage, roles and responsibilities of members must be announced to the students in advance through the program coordinators rather than the team leaders.
In storming stage, the second in team development process where the first signs of team spirit emerge, the online learners expressed on the communication problems. A male learner mentioned, "I have had so many problems with my team. We weren't able to communicate in a healthy way. I couldn't explain them that our main duty was to complete our assignments. I’m tired of listening personal problems. ...There are members who constantly quarrel". Another one said, "Teamwork is okay but constant hassling of some of our friends caused us to get very low marks in the assignments". Ineffective operation of this stage usually reduces the morale and the motivation of team members. It may cause problems for the team both in reaching the targeted goals and in moving on the next stage.

In norming stage, interactions among members are expected to increase. Experience of an effective communication process based on cooperation among team members towards the achievement of common goals is the most important output of this process. The literature indicates that those frequently interact with the instructor and with other learners usually develop more positive attitudes toward teamwork (Dougherty ve Funke, 1998). Also, interaction within a team plays a central role in the learners’ voluntary participation to teamwork (Romiszowski & Mason, 2004; Rovai 2002a; Rovai & Ponton 2006). The current study, on the other hand, showed that the some online learners continue to experience communication problems that caused ineffective collaboration during the completion of the team assignments.

In the performing stage, the participants are expected to complete their tasks. The literature again clearly documents that shared responsibilities help the formation of the sense of connectedness among team members and the achievement of thorough learning (Biggs, 1985; Hammond, 2005; Rovai & Barnum, 2003; Saba, 2000). The study uncover that the team members have failed to fulfill their responsibilities in this stage. One of the participant learners emphasized the failure of the team members fulfilling their duties. She noted, "some of them often neglected their assignment-related duties and that was one of the reasons I did not feel like I am in a class". It seems that this problem became a barrier to build a sense of connectedness among the members.

In the last stage, or the adjourning stage, team members tend to maintain their communication after the assignment done. But, this study documented that the majority of the learners have a low tendency to contact with their team members after the assignments completed. This result can be considered as a reflection of problems that have emerged during the other stages.

CONCLUSIONS

This study was intended to investigate the relationship between sense of community and team development process in online programs. Specifically, it examined the Turkish online learners’ perceptions of sense of classroom community, of success in team development process and their preferences of studying in teams. The study has shown that the majority of the online learners in the Information Management Associate Degree Program of Anadolu University, Turkey could not feel a strong sense of classroom community. Especially they did not think that they learnt a lot during the teamwork assignments.

Similarly, a big number of them did not perceive success in all stages of the team development process. Correlational analyses have shown a moderate statistical relation in general between the learners’ perceptions of sense of classroom community and their perceptions of success in team development processes. The analyses have also suggested that there were moderate and weak correlations between all the sub-dimensions of the classroom community scale and all the stages of the team development process. In the light of this finding, this study suggests that sense of presence can be used as predictor of success in team development processes in online learning or vice versa. However, since
the correlation coefficients were observed either moderate or low, it might be possible to find different results in similar studies with different participants and in various contexts.

Furthermore, this study has revealed that the online learners in Turkey generally prefer individual study rather than the teamwork. Since the education system including primary, secondary and higher education in Turkey is quite competitive and individualistic, this result can be considered as consistent. Increasing importance of the education has been among the major global trends since the last three decades. Not only individuals but also parents, public and private institutions, and even governments pay more attention on quality education mainly because of fighting with poverty, having better life standards, moving to upper social classes, having better economies, and so forth. This big a big demand for education has also been a major issue for almost all countries regardless of being developed, under developed or emerging. Therefore, access to education today became a race in many countries. Turkey is one of these countries in which the access to education is quite competitive. Having an undergraduate degree is considered as a means for getting a decent job. So, every year millions of people take the centralized university entrance exam to be able to get in a program. However, due to shortage of enough number of seats, a few of them can get in traditional four or more years long undergraduate degree programs, a bit more can get in two year associate degree or vocational programs, almost the same number can register increasing number of open and distance learning programs, and some have to wait for the next year to retake the exam. Similarly, middle school students compete to be able to get in a better high school in another centralized exam. In short, as indicated many reports and studies, the education system in Turkey is quite individualistic and competitive (TED, 2010). This study was also supported this situation. Since the learners had been in such a competitive and individualistic system, it should be expected that these learners prefer studying in teams to studying alone.

In terms of relationship between the learners’ preference to study in teams and their perceptions of sense of classroom community and of success in the team development, positive relationships were observed. In other words, those who preferred to study in teams (although the number was not high) perceived more sense of classroom community and more success in the team development compare to those who did not prefer teamwork. These learners were the ones that had better communication with the team members, performed or experienced better leadership in their teams, and fulfilled their responsibilities on time. Therefore, the characteristics described above can be considered as the major factors for an effective teamwork, perception of high level of sense of community and of success in team development. On the other hand, research studies (e.g. Kim, Know, & Cho, 2011; Zhan & Mei, 2013) have uncover the strong positive relationship between sense of community and achievement, satisfaction and course performance. Students clearly reveal that students’ attitudes toward learning will be higher in learning environments where students feel higher sense of community and less isolation. In the light of these studies, one can easily infer that it is crucial to identify the students’ level of feelings of sense of community (Gökçearslan, 2013).

In terms of the scales, the analyses have revealed that both scales are reliable instruments to collect data on learners’ perceptions of sense of classroom community and of success in team development. Correlational analyses have also uncovered positive relationships between in the sub-dimensions of the both scales. However, these relationships were observed as moderate correlation coefficient. Especially in the team development process, lack of any significant relationship between certain dimensions (forming) decrease the strength of the relations among other dimensions. This finding supports the results of previous studies, such as Gunaverdana et al., (2001).
RECOMENDATIONS

Followings are some recommendations for the instructors and program/course designers, and for researchers to improve the effectiveness of teamwork, the perception of a sense of community and of success in team development in online learning environments.

Recomendations for Designers and/or Instructors

As it is well documented in the literature and supported by this study, the designers and/or instructors focus on establishing common goals, certain roles and responsibilities, clear directions fulfilling the tasks, and formative assessment of the teamwork. The following recommendations may help them focus on these major factors:

1. Effectiveness, efficiency and appeal of teamwork are closely related to each member’s fulfillment of roles and responsibilities on time. The team members might start the team assignments with an orientation session before the actual assignments to be able to get accustomed with team learning and teamwork processes.

2. Common goals bringing the team members together must clearly be defined. In line with these defined common goals, the team members must identify who is in charge of what before the assignments. The roles must change in every assignment to allow equal experience to all members of the team.

3. All stages of team development process must be monitored through a control chart. Works of team members must be assessed based on the criteria specified for both their individual and team contributions. This way, it can be identified on which stages of the process the problems concentrate and solutions can be offered accordingly.

4. Allowing the learners form their own teams may work in some instances. However, for those who may have difficulty to form teams, the designers/instructors should find appropriate team members.

5. Scaffolding strategy can be thought of for the team leaders to perform better leadership.

Recomendations For Future Research

1. This study was conducted with the participation of the second year learners of the Information Management Associate Degree Program in Anadolu University, Turkey. In order to examine the relationship between the sense of community and the team development process more thoroughly and reach more generalizable conclusions, variables affecting these processes must be investigated on different programs and with various learner groups.

2. In addition to quantitative data, qualitative data can be collected to have an in-depth insight about the relationship between sense of community and team development process.

3. Online environment eliminates the restrictions of time and space and brings learners from different cultures together. Therefore, implications of cultural differences on the sense of community and team development process must be investigated.

4. The study evaluated the relationship between the sense of community and the team development process from the learners’ point of view. Investigation of the instructors or facilitators may also be helpful.
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THE DEVELOPMENT OF VIRTUAL SCHOOLING
IN NEWFOUNDLAND AND LABRADOR

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ABSTRACT

K-12 online distance education is growing rapidly and many organizations focus on virtual schooling in Canada. The centre for Distance Learning and Innovation (CDLI) was established in 2000 in Newfoundland and Labrador and has been offering numerous opportunities to rural high school students through online distance education. In this paper, the authors have outlined the historical development of distance education in Newfoundland and Labrador. The concept of distance education in NL is not a new phenomenon. It can be traced back in 1930s. Since then, several efforts have been made to enhance equality of educational opportunities to rural students. Despite the tremendous impact that the CDLI has had on distance education few related research documents or associated scholarly articles exist. At the end of the article some recommendations are made to improve virtual schooling in the province.

Key Words: Virtual schooling, rural education, small schools, CDLI.

INTRODUCTION

The rapid expansion of the role of personal computing in everyday lives, along with increasingly reliable networking technologies as well as the explosive rise of the Internet led to an associated rise in Virtual Schooling. Virtual schooling or Online Distance Education (ODE) at the K-12 level became feasible on a large scale in the 1990s. Since then, its growth has increased very quickly, and still continues to increase (de la Varre, Keane, & Irvin, 2011). Most states in the US and many jurisdictions in the United Kingdom, Australia, Canada and New Zealand have their own virtual schools (Barbour & Reeves, 2009; Compton, Davis, & Mackey, 2009; Zucker & Kozma, 2003). Rice (2012) reports the increase in K-12 online distance education in the United States context. She notes that in the US, the annual growth of virtual schooling is 30%. The enrolment in online courses has reached 4 million in 2011 an increase from 50,000 in 2000. Forty five states out of fifty have their own virtual schools. In the same vein, the use of virtual schooling in Canada is growing. According to Barbour (2013), there were almost 25,000 K-12 students enrolled in online distance courses in 1999/00 in Canada, while the number of enrolments has reached 284,963 in 2012/13. This rapid growth in virtual schooling occurs because of various factors such as increase in access to the internet, a decrease in the price of hardware, a growing variety of learners with different educational needs, and the appeal of cost effectiveness distance education (Johnson, 2011). Learners take online courses because of flexibility, physical disability, and limited curriculum at their own schools, rural schools, underserved, disciplinary problems, and a desire for home schooling (Roblyer, 2005).
There are 251 programs which offer K-12 online distance education in Canada (Barbour, 2013). Some provinces have one program while others have more than one depending on the students' enrolment and needs for distance courses. Due to the rapid proliferation of digital technologies and their use in education especially in virtual schooling, it is significant to know how these programs are operating. There is a lack of literature which indicates the characteristics of such programs. In this paper, we will shed light on the program offered by the Centre for Distance Learning and Innovation (CDLI). The purpose of this paper is to optimise readers' understanding towards the historical development of virtual schooling in Newfoundland and Labrador. The paper will encompass the initial issues, delivery of courses, content development in the CDLI domain. At the end, we will make some suggestions to optimise the benefit of virtual schooling in NL.

**CDLI: A CASE OF VIRTUAL SCHOOLING**

**Rural Nature of the Province**

One of the major issues of the province is its rural nature. The total area of the province is approximately 400,000 km² which is approximately twice the size of Great Britain. More than 50% of the population lives in the capital or in its suburbs, while the remainder lives in many small remote communities. These rural communities are not close to each other, some of the communities are accessible only by plane or by boat. Providing K-12 education in such sparsely populated communities is not an easy task. This is a perennial challenge which can be seen through statistical report of the Department of Education:

"The people in Newfoundland dwell in approximately thirteen hundred settlements scattered mainly over a coastline of some six thousand miles, and the problem of supplying educational facilities to the people of these settlements is a very difficult one" (Burke, 1935).

**Decline in Population**

Many rural communities around the globe are facing many challenges and the rural communities in NL are no exception. The challenges that rural communities face include, but are not limited to the decline in forestry, agriculture, fishing and mining industries. The fall in resource-based industries have significant impact on the decline in population. In the NL context, the demographic change occurred due to two main factors; one is change in fertility and the second out-migration. It is estimated that a woman would need to have an average of 2.1 children for a population to reach stable replacement levels. In Newfoundland and Labrador, the fertility rate is 1.45 per woman, which is the second lowest fertility rate in Canada. The reason for this low fertility rate is that during the decades of 1960s and 1970s the female baby boomers joined post secondary education institutes in order to gain jobs (Mulcahy, 2007). The decline in the fishing industry resulted low population in rural communities. Many people out-migrated in search of jobs. Some moved to other provinces while others moved to the urban centres of the province. As a result, the enrolment in schools dramatically dropped. In the mid 1970s, there were around 160, 000 school-aged students while there are less than 70,000 in 2013/14. Decline in school enrolment resulted in job cuts. In the 1960s, families with eight and even ten children were common. Now, because of outmigration, the situation is reversed. The majority of school-aged children live in the large centers. The rural schools in small and isolated communities often have very small number of students. Many small schools were consolidated during the last fifty years. However, complete consolidation of rural schools was not possible due to the large distance among communities. The recruitment and retention of qualified teachers for small schools is another critical issue. Therefore, the provision of a comprehensive curriculum at the rural high schools is a great challenge.
Early Efforts of Distance Education
Considering geographical and demographical challenges of the province, several efforts were made by the department of education in the past to provide equality of educational opportunities to students in rural communities through distance education such as correspondence courses and radio.

The School on Wheels 1936-1942
It was difficult for small communities to support a school. Therefore, a railcar was used to teach the children in small communities which were close to railway track. The program was named "The School on Wheels". The Department of Education, the Newfoundland Railway and the Anglo-Newfoundland Company jointly launched the project (Noseworthy, 1997). The railcar served the communities from 1936 to 1942. Then, the service was discontinued because of low enrolment in the program.

The Correspondence Division 1938-1942
The Department of Education established a correspondence division and attached it with the railcar program. Approximately one hundred children from remote communities were served through correspondence courses in the first year of the program (Department of Education, 1938). With the discontinuation of the School on Wheel program, the correspondence courses program was also came to an end.

Radio Education 1950s
In 1950, Audio-Visual Division was made responsible for the promotion of school broadcast. During the year, Newfoundland first time actively participated in the planning and production of the Atlantic School Broad Casts (Department of Education, 1950). The aim of the broadcast was to supplement the curricular program of studies in music, physical fitness, oral French, English, health, social studies, science, and vocational guidance. The provincial government took responsibility to provide financial aid to school boards for purchasing the radio-phonographs. Thirty five school boards were subsidized in the purchase of thirty nine radio-phonographs which was designed for educational purposes. Both types of radio-phonographs were available; electrically operated and battery operated. During the following years, ninety two schools applied for radio licensing. In addition to radio-phonographs, 10, 544 documentary films and film strips were circulated free of charge to schools, colleges and other organizations. In 1954, with the collaboration of CBC, Radio was directly used to assist teachers and students on the Newfoundland course of study.

Correspondence Courses
To cope with the issue of shortage of teachers in small schools, a committee lead by the Director of Audio-Visual Education recommended the use of correspondences courses with radio integration (Department of Education, 1957). The correspondence courses program was initiated in 1958. The correspondence courses program served rural students from various communities. Due to the introduction of scholarships and bursaries, the enrolment in correspondence courses program decreased. As a result, the correspondence courses program had to discontinue.

Small Schools Study Project
In 1964, the provincial government created a Royal Commission on Education and Youth. The commission was established to study all aspects of education, and to make recommendations to improve the educational standard in the province. Dr. Philip Warren from Memorial University was appointed as a head of the commission. The commission thoroughly examined the educational system and presented its report in two volumes. The first volume was presented in January 1967 and the second in October 1967. The commission attributed low achievements of students due to various factors one of them was a large number of small
schools in rural communities. Besides other recommendations, the commission recommended a large scale of consolidation of school boards and small schools (Warren, 1967). As a result, many small schools were either eliminated or consolidated without the consideration of unique characteristics of small communities.

In 1986, Dr. Frank Riggs was appointed by the provincial Department of Education to conduct a study on small schools in the province. The report "Report of the SMALL SCHOOLS STUDY PROJECT" was published in 1987. Riggs (1987) recommended distance education as a solution to the issue of the provision of comprehensive curriculum. The recommendations were:
That by direct classroom teaching or by distance education, all senior high schools should have the ability to offer all courses which are prerequisite to entry into post-secondary institutions and the ability to accommodate particular course requirements of small numbers of students. That greater use of technology be made in program delivery in small schools; especially in small high schools

That a Distance Education School be established and a principal and teachers be employed to assume responsibility for the development and administration of distance education courses. As a result, in 1988-89, the grade ten Advanced Mathematics course was offered in 13 pilot schools through distance education using Telemedicine Education and Technology Resource Agency (TETRA) network, located at the Health Sciences (Johnson, 2011). This was the first step towards e-learning at the K-12 level in the province. The TETRA network used an analog, rather than a digital network; a combination of audio graphic technology and tele-writers (Barbour, 2007). A telephone-based conferencing system was used to join the classrooms. All the students were taught synchronously. The project became very popular. As a result, more courses were offered through TETRA. Similarly, many other schools showed their interest in the project and became a part of it.

In 1989 and 1990, grade eleven and grade twelve advanced mathematics were added respectively. In 1991 and 1992, grade eleven and grade twelve physics and core French were added respectively. In 1995 and 1996, grade eleven and grade twelve chemistry were added respectively.

Not only did the course offerings broaden, but also the number of schools reached by the program expanded. By 1996, over eighty small rural schools participated in the program. The students participated from all rural parts of the province. The instructors were also located throughout the province. The provincial examination were showing that achievement and completion rates on par with face to face classes.

**The Lighthouse Project**

In 1990, Newfoundland and Labrador started its first computer networking project "The Lighthouse Project". The Lighthouse Project equipped 31 high schools with a networked computer lab (Boone, 2010). Teachers on-site were trained to work with it. One of the major challenges of the project was the unavailability of ICT specialists. The network was designed, developed and implemented by the teachers, under the guidance of Frank Shapleigh, a high school teacher who was seconded to lead and implement the project. The technologies were accessible to students as well.

**STEM ~Net Project**

In 1993, the Canadian federal government and Memorial University launched the STEM ~Net Project in the province. The main purpose of the project was to bring Internet based educational opportunities to Science, Technology and Mathematics teachers and students in the province. With the advancement in internet and computer technology, the project circle
extended to other subjects. Three main STEM ~Net servers were obtained; two of them were used as the main system servers at Memorial University while the third portable server was used for training purposes. The STEM ~Net Project had its own specific website, dedicated to educational networking activities. With the efforts of the STEM ~Net Project, all the schools in the province were connected to the Internet. Thus, NL became the first Canadian province to have all its schools online.

**East West Project**

In 1996, the East-West joint project was launched to produce course based information technology curriculum to high school learners by the governments of British Columbia, Newfoundland and Labrador, New Brunswick and Alberta (Barbour, 2005; Boone, 2010). Each province produced a module dealing with predefined topics such as web publishing, graphic design, telecommunication networks, telecommunications and computer applications. Later, individual school districts started delivering distance courses.

**The Vista Project**

In 1998, with the funding from Industry Canada and the collaboration of STEM ~Net, the Vista School District and Faculty of Education, four Advanced Placement web-based courses (Physics, Chemistry, Biology and Mathematics) were developed and offered to rural students within the Vista School district. Eight sites were electronically linked to each other within the Vista school district (Stevens, 2006). The delivery system used a combination of WebCT, NetMeeting (with a MeetingPoint bridge for enabling multi-site classrooms) and KnowledgeForum for delivery. In the following year, a grade ten Art Technology courses was also developed and offered through the same media technologies as were used for the Vista project. During the year, two other districts were also added to the project. The Learning Management System (LMS) which was used in the project had student email, reasonable powerful online testing tools, a drop box for submission of work, a discussion forum and a grade book. The project was a great success and paved the way for the virtual schooling in the province.

**Center for Distance Learning and Innovation**

In 1999, the Government of Newfoundland and Labrador appointed a Ministerial Panel on educational delivery in the classroom. The Sparks-Williams Ministerial Panel recommended that the Department of Education establish a Centre for Distance Learning and Innovation in the province (Sparks & Williams, 2000). As a result, in December 2000 the Centre for Distance Learning and Innovation (CDLI) was established by the Department of Education. The main purpose of the CDLI was to increase learning opportunities and career options for students especially in rural areas, although it had two other mandates, namely the Integration of Communication and Learning Technologies (ICLT), as well as online teacher professional development, which was accomplished at the time through a partnership with the Newfoundland Labrador Teacher's association called the Virtual Teacher Centre (VTC).

In the beginning, it was decided to pilot ten new Internet-based courses, one each in the ten English districts that existed at the time. Internet connectivity was upgraded in some parts where it was possible. In other places, many satellite services were located and purchased. So, after the successful pilot year, the CDLI implemented Internet-based courses to school year 2002-03. In that school year, 17 online courses were offered to high school students in rural areas. The CDLI was created as a division of the Department of Education. The e-teachers were hired by the CDLI through the cooperation of district schools in 2002. The teachers were also trained to use LMS (WebCT) and the synchronous tool (vClass). In the pilot project, the concept of a mTeacher (mediating teacher) was introduced. The mTeacher being one of the school's teachers located onsite would help out with the implementation.
Later, mTeam (mediating team) was introduced. An mTeam had four components; administration, coaching, peer support, and technical. The administration such as registration and selection of the students, and the provision of adequate space for e-learners, was done by the principal. Coaching was done by the e-teachers with the help of an on-site facilitator. Senior fellow students would help their junior peers in basic training. Technical problems were solved by the district technician with the help of an on-site facilitator. Almost all the above mentioned mTeams members are working with the same responsibilities.

Currently, the CDLI delivers over 40 online courses approximately 1000 high school students. The courses through the CDLI are offered synchronously and asynchronously. The CDLI is the only organization providing K-12 online distance education in the province. In the CDLI modal, the principal or the designate at school levels selects and registers students for online courses. The principal also makes sure that students have adequate supervision while they are in an online class. The M-Team (On-site support team consisting of administration, teachers, district technology support personnel as well as students) supervises and liaisons with the e-teacher. Senior students help their fellows in basic training and coaching. Technical issues are solved by the district technicians in partnership with the CDLI.

More than a decade has passed since the inception of the CDLI, however, there is a lack of systematic effective research on the CDLI. Few studies were published on the development of distance education (Barbour, 2005; Barbour, 2008; Boone, 2010; Mulcahy, 2007; & Press, Galway & Collins, 2003; Saqlain, 2013), the integration of technology in rural schools (Sheppard, Boons & Stevens, 2001), the effectiveness of distance education (Crocker, 2007), the impact of high school web based education on rural students' achievement and persistence (Dodd, Kirby, Seifert & Sharp, 2009), perceptions of distance education (Johnson, 2011), the role of on-site facilitators (Barbour & Mulcahy, 2009), the need of change in teaching (Stevens, 2006; Stevens; 2007), the perspectives of high school distance education teachers on synchronous and asynchronous teaching (Murphy, Rodriguez-Manazanares & Barbour, 2011), and the use of virtual teaching (Saqlain, 2014). However, there is a lack of literature which indicates in depth the characteristics of the CDLI.

CONCLUSION

To cope with the issues of decreasing population and a large geographical area of Newfoundland and Labrador, virtual schooling was introduced under necessity. However, it evolved over time through various steps which were taken in the past. The inception of web-based courses through the CDLI is one of the major historical development in the province. As the proliferation of virtual schooling is growing, the demand of change in traditional teaching is also increasing. Therefore, there is an immense need of virtual teacher training. It is time to start e-teacher training at undergraduate and at graduate levels. There is also the possibility of additional e-learning support at grades below the high school level that needs to be investigated. There is also need to explore the issues related to virtual schooling such as course design and delivery, students support through the CDLI and school-based support, the roles of e-teachers and on-site facilitators. A systematic research study on the CDLI may also enhance our understanding of the program.
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RESEARCHING AND EVALUATING DIGITAL STORYTELLING AS A DISTANCE EDUCATION TOOL IN PHYSICS INSTRUCTION: AN APPLICATION WITH PRE-SERVICE PHYSICS TEACHERS

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ABSTRACT

Advances in information and communication technology in 21st century have led to changes in education trends and today new concepts such as computer, multimedia, audio, video, animation and internet have become an indispensable part of life. The storytelling is the one of approach which is allowed to using technology in educational field. The aim of this study is to define the use of digital storytelling in physics instruction as a distance education tool. In this respect, the literature related to digital storytelling was analyzed and for applying it in practice, 13 pre-service teachers from department of physic education were trained on digital storytelling for 6 weeks in spring term of 2013-2014 academic year. Following the process of instruction, pre-service teachers created and shared digital stories in YouTube and evaluated all of them. Furthermore, opinions of the pre-service teachers were asked on digital storytelling. As a result of the analysing the DST videos and opinions of pre-service teacher, it is expected that using digital storytelling as distance education tool will be efficacious.

Keywords: Digital storytelling, Physics Instruction, Distance Education, Internet-based Learning.

INTRODUCTION

In 21st century, new concepts and technological means such as computers, internet, multimedia, audio, video and animation have attained place in education and instruction (Alakoc, 2003). Today, by means of enhancement in technology and internet tools, internet access could be available from everywhere, even with cell phones. As individuals get access to internet independent from space and time, the use of internet is increasing (Karagulle and Cayci, 2014) and individuals get information whenever and wherever it is needed. These advances in information communication technology causes information to emerge in various forms like audio, video, animation and combination. This, hence, leads to changes in education and instruction environments.

In facing the needs of knowledge period in which we live, requirements expected from the learner in educational activities undergo a change as well. Presently, the learner is anticipated not only to perform media and technology literacy but also to integrate technology, one of necessities of modern education, into education and instruction setting (Gunduz and Odabasi, 2004). Since today’s individuals have technological
opportunities like cell phone, television, video, internet and computer, any information concerning to a particular subject needs to be set up and to be enriched by technology.

Given the circumstance that people use technologic means such as computer, internet, and smart phones every day, it is vital to note that individuals (academicians, teachers and experts etc.) who are responsible for teaching in education and instruction environment should both resolve information in various forms of materials like video, audio, text, graphs and images and serve knowledge by combining and constructing to the learners and those who are dropout (Reiner, 2009).

Considering today’s technological means as well as opportunities that individuals have, it is crystal clear that education and instruction are not any more just activities carried out in classroom environment. Whether individuals are in formal or non-formal education, even in distance learning, they can easily attain information anywhere and anytime they want. Hence, there is a need for new methods in education that enable individuals to construct the knowledge in combinations, to share it online and to make it accessible with ease. In this regard, digital storytelling appears to be an appropriate and effective method.

**DIGITAL STORYTELLING**

There have been many definitions about digital storytelling in related literature. Porter (2004) defined storytelling as combining authentic stories with image, music, graphs and voice-over while Dupain and Magure (2005) described it as creating a story by integrating multimedia elements such as visuals, audio, video and animation as well as Chung (2007) highlighted it as a harmonious multimedia presentation composed of digital components such as text, visuals, video and audio. However, digital storytelling are overall considered as generating a story about a subject by using multimedia tools and software and sharing this story in multimedia environment (Nguyen, 2011; Robin, 2008). Nearly all digital stories are originated via combining components (text, voice-over, video, music, and visuals) with an authentic story on a particular subject.

Digital stories, altogether, are short videos created by integrating image, video, background music and audible or written narration via some basic hardware and software (Microsoft Photo Story, Windows Movie Maker, Wevideo, Web 2.0 etc.) with authentic story (Wang and Zhan, 2010). Nevertheless, digital storytelling is not just a plain power point presentation (Dreon, Kerper, and Landis, 2011). Robin and Pierson (2005) noted that digital storytelling is the activity of producing meaningful stories that reflect individuals’ imagination. Digital stories can have aim of informative, instructive and personal narration (Robin, 2008). Digital stories can rise up in different types ranging from personal narratives or instructional stories to narratives that recount historical events and in many different fields ranging from social science to science (Coutinho, 2010). Banaszewski (2005) pointed out that educational technologies have progressively taken place in education and instruction environment, accordingly, digital story have become widespread in classroom setting and in various fields of study as stated by many academicians, researchers and educators.

Digital storytelling has improved since educators started to use various kinds of digital narrating in 1990s. Digital stories enable people to create and share their own stories by using digital technology and media, so digital technology and especially social media, today, give teachers and students the opportunity to not only publish their own stories but also view and evaluate other stories (Garrety, 2008). Digital storytelling has, ever since 1990s, been used in many fields ranging from social sciences and language to science and literacy; moreover, it is being used in a number of different fields.

The considerable attention given to digital storytelling is credited to its having multiple viewpoints (Garcia and Rossiter, 2010). Digital storytelling serves as a popular pedagogical tool used for students from all ages and educational background as well as
ethnicity (Garcia and Rossiter, 2010). What is more, the effect of digital stories have increased as it reaches to millions of people via internet (Standley, 2003).

Types of Digital Stories
It is highlighted in the related literature that there are many different types of digital stories used for various purposes. Robin (2008) who is one foremost figure concerning digital stories categorized these types into three major groups. These are:

1. Digital Stories That Instruct: Purpose of this type of digital stories is to teach certain issues or subjects to the viewers. Instructors can use this type for teaching subject from fields such as science, mathematics, history and social science (Robin, 2008). Kahraman (2013) has pointed out that the use of digital stories in physics instruction has become effective in students’ achievement.

2. Personal Narratives: One of the reasons for using this type of digital stories is to share an account of experience, autobiography, memory or events that make up one’s life.

3. Digital Stories That Recount Historical Events: The reason for producing this type is to examine historical events and convey the event with a different point of view. Historic photos and speeches are especially employed in these digital stories. Using historic images, newspaper headlines, speeches and other materials about historical events, students can create an authentic story that may reflect different perspective (Robin, 2008).

Process of Producing Digital Story
The process of creating a digital story is mainly described in six steps (Jakes and Brennan, 2005). These are:

1. Writing: In this step, the author or creator begins with finding a subject for the story. A draft of script is developed, and then it is discussed and reviewed by others. Finally, the draft of script is modified and completed in accordance with comments and evaluations.

2. Script: The script is brought to a whole after completion of narrative. This script also defines the multimedia elements to be used in the story and how these multimedia components will be used; in this respect, script is regarded as the basis of digital story.

3. Storyboarding: Storyboarding is the plan of sequencing scenes, transitions and the effects. The aim of storyboard process is to visualize how a movie or digital story will work. Storyboard is used for organizing and planning harmony of music, image, audio and video (Lambert, 2010).

4. Locating Multimedia: This step can be defined in two phases; (a) on completing storyboarding, the author searches for multimedia components (visuals, music, audio, photos, graphs etc.) to be used for sketching and enhancing the script by means of making use of sources online, in print or taking pictures. The components obtained from various sources are saved as files to a computer or USB flash driver. (b) Afterwards, it comes to record voice-over. It should be emphatic and emotional (Kajder and Swenson, 2004). Recording voice-over can be conducted via computers equipped with speakers and microphones, smart phones, tape or digital recorders. During the record, it is essential that the environment should be silent and record be rehearsed once or twice to make it effective.

5. Creating Digital Story: In this step, digital story is produced by means of various software. All the components such as text, voice-over, visuals, graphs, animations, photos and music are combined. In order to create digital story, Microsoft Photo Story, Windows Movie Maker, Wevideo (www.wevideo.com) or Web 2.0 can be employed. All the components are associated with each other to organize a harmonious flow of video. Once the components are assembled, the final video is produced, that is, rendering and then it is saved on computer.
6. **Sharing Digital Story:** As for this step, which is the most critical one, digital story is shared with individuals in classroom or social media such as YouTube, facebook, twitter etc. Finally, the process of creating digital story is completed after taking comments and evaluations from viewers.

In process of producing digital story, author picks and explores an issue or subject. Using the information obtained from the search, author writes a text and, based on this text, creates an authentic script. Then a short video is produced by combining visuals, graphs, audio, text, animation and music with the script, namely authentic story. Finally, this combination is transformed into a short video that can be viewed in digital environment (Robin, 2008). Digital stories are viewed and evaluated by individuals. In the upshot of this process, certain skills such as writing, arranging, technology literacy, presenting, problem-solving, evaluating and collaboration (Robin, 2006).

However, in order to produce effective digital stories, it is essential to consider seven elements (Robin, 2006; Lambert, 2010). They are:

1. **Point of View:** Main perspective that author reflects.
2. **A Dramatic Question:** A question that attracts attention and will be answered at the end of story.
3. **Emotional Content:** Story or content that will inflect viewers.
4. **Gift of Your Voice:** Narration that helps viewers to personalize the story.
5. **Power of Soundtrack:** Music or other sounds that support and embellish the story.
6. **Economy:** Employing enough content without unnecessary components.
7. **Pacing:** The rhythm of the story and how slowly or quickly it paces.

**Digital Storytelling and Physics Instruction**

Digital storytelling is employed with the purpose of teaching course content inside or outside classroom environment, allowing students to be active learners, creating communities, fostering collaboration as well as providing students with technology literacy (Karakoyun, 2014). Digital stories in teaching-instruction environment are implemented concerning such fields as society, culture and language (Banaszewski, 2005; Yang and Wu, 2012; Demirer, 2013). Notwithstanding, studies on the use of digital stories in physics instruction seem to be scarce in the related literature. With respect to the process of its emergence, in Turkey it appears that digital storytelling is not adequately recognized and implemented in physics instruction apart from a few studies (Kahraman, 2013). Moreover, in Turkey it is considered that thanks to methods such as digital storytelling that can provide individuals with opportunity to engage in physics, individuals could use multimedia tools more effectively and efficiently and benefit from mobile phones, internet and computer inside and outside teaching-instruction environment, even in daily life.

Digital stories related to physics subjects can be supplied to individuals without any limitation of place and time with the help of sharing via internet. Therefore, viewing digital stories, learners could attain knowledge about the subject they are searching. As a result, digital stories, digital stories could be used as a distance education tool that is based on internet.

**Internet-Based Distance Education**

The sharp increase in the use of internet and methods that tend to seek using of internet led to take place in teaching-instruction environment. Distance learning is an education model in which not only instruction content are conveyed but also interaction is carried out by means of communication technologies without any restriction in space and time between the learner and educator. Highlighted benefits of internet-based distance learning as below;

- Students can compensate for the subject that they could not keep up with if it is supplied as a support to formal education.
Student can review subjects in course that are difficult to understand.
- It can relieve problems resulting from lack of time.
- It allows students to learn practice, application and simulations of the subject that are ignored in course, hence could not be recognized.
- It can serve various solutions to problems and subjects that students have difficulty in acknowledging and practicing.
- It supports the learning by offering more visuals about subjects.
- It allows individuals, who aim to work rather than attending courses, to master a branch by means of modern technological tools.

**Importance of the Study**
In addition to benefits mentioned above, internet-based distance education could provide individuals, who dropped out of school because of lack of means and facilities, with opportunity of distance learning. In fact, regarding the aspects of distance education and life-long learning, making digital stories about physics subjects available, sharing them online, allowing students to explore digital stories about physics subjects that they are interested anytime and anywhere they feel like are of considerable importance. However, in the related literature, there is hardly a study that has been implemented for these purposes; hence, the need to carry out this study has emerged.

**MATERIAL AND METHOD**

**Purpose of the research**
The purpose of this study is to explore and discuss the usability of ‘digital storytelling’ as an online distance education tool in physics instruction. The main questions of the study were the following:

1. How do students perceive the impact of the using the Digital Storytelling on their learning of Physics?
2. Can we use The Digital Storytelling as a distance education tool in physics instruction? research questions was investigated and examined.

**Method**
Qualitative research method was used in this study. In the selection of the study group (13 volunteered), the purposeful sampling was used within the framework of the research. The data in this study were collected using interviews with 13 participant and document analysis. which is the analysis of the documents related to the topic focused on. In conducting document analysis, the borders of the topic studied should be determined clearly and the documents suitable to the nature of the topic should be selected (Yildirim and Simsek, 2011). In this study information obtained from books, studies, thesis, and internet sources about digital storytelling were reviewed and analysed. After digital stories about ‘modern physics’ subject were produced and shared on internet by pre-service physics teachers’ view were gathered.

**Participants**
Participants of this study consist of 13 pre-service physics teachers registered to Physics Teacher Education Department of Education Faculty of Yuzuncu Yil University in spring term of 2013-2014 academic years.

**Research Procedures**
The duration of the study with 13 pre-service physics teachers was 6 weeks between April and May 2014. In the process of digital storytelling, pre-service physics teachers come up with an idea and they research, explore and learn about this idea, afterwards they write a script using the information gathered and create an authentic story. After gathering images, audio and graphics students blend their own story with these multimedia elements and finally create a short video that can be viewed in web or computer environment. Teacher-produced digital stories were viewed and evaluated by pre-service teachers. The outline of the application is shown in Table 1.
Table 1
The outline of application with group

<table>
<thead>
<tr>
<th>Week</th>
<th>Task</th>
<th>Task</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.wk</td>
<td>Inform about the process</td>
<td>Introduce DST procedures, Show the self-made digital story</td>
<td>Introduce Windows Movie Maker</td>
</tr>
<tr>
<td>2.wk</td>
<td>Review Modern Physics unit and choose an interesting topic</td>
<td>Explain reasons for choosing the issues</td>
<td>Content Scanning Related to Selected Issues</td>
</tr>
<tr>
<td>3.wk</td>
<td>Arranging Scripts</td>
<td>Discussion of the Scripts In Groups</td>
<td>Scan for images</td>
</tr>
<tr>
<td>4.wk</td>
<td>Arrange Images</td>
<td>Sharing Views on Script-Images Harmony</td>
<td>Search for Background Music</td>
</tr>
<tr>
<td>5.wk</td>
<td>Provide Harmony Audio-Music-Content</td>
<td>Installing Background Music and students’ Audio to Video</td>
<td>Upload 3-5 minute Digital Story to the Web Environment</td>
</tr>
<tr>
<td>6.wk</td>
<td>Watch digital stories uploaded in Web Environments</td>
<td>Share reflections and comments for each Video by the students</td>
<td>Provide Feedback by the owners to the criticism of the videos and Making Corrections</td>
</tr>
</tbody>
</table>

Data Collection Tools
Interview. The interview items were developed by the researchers. Five items in the interview aimed at exploring students’ perceptions of their learning and aimed to exploring digital storytelling as a distance education tool. The questions of the interview were the following:

1. Are you enjoy using the Digital Storytelling for Distance Education activities?
2. Do you think the use of Digital Storytelling on YouTube helped your learning?
3. Do you think the Digital Storytelling served as a learning aid?
4. Do you think using the Digital Storytelling as a distance education tool will be efficacious?
5. Do you think Digital Storytelling allowed you more creativity in designing projects and assignments?

Document Analysis
Information obtained from books, studies, thesis, and internet sources about digital storytelling were reviewed and analysed.

RESULTS

After six-week application, each pre-service teacher created an authentic digital story. A channel named as 'DST-YUY-FİZİK-2014' was created and subscribing this channel, teachers uploaded their own digital stories and then they evaluated one another’s stories. Meanwhile it was also announced to other students, academicians and teachers to view and evaluate student-produced videos from the link https://www.youtube.com/channel/UCC2nHVHF1RLO2zpS6uOm6Mg Subsequent to evaluation, some pre-service teachers are demanded to prepare one more digital story so
17 digital stories were published on total. Besides, pre-service teachers were allowed to share digital stories in social media such as Facebook, Twitter and so on. Subjects, spans and links of digital stories are given below:

1. Photoelectric Effect: https://www.youtube.com/watch?v=j8SYTYIc3xQ

2. General Relativity: https://www.youtube.com/watch?v=PlEmTnb90IE

3. X-Ray: https://www.youtube.com/watch?v=NkcbCgXAk10

4. Radioactivity: https://www.youtube.com/watch?v=f8-CBbgw1Mw

5. Michelson and Morley Experiment: https://www.youtube.com/watch?v=w1PKOwSgga4

6. Franck-Hertz Experiment: https://www.youtube.com/watch?v=sQ6BwpAjt6I

7. Black Hole: https://www.youtube.com/watch?v=nqawLMoAyFI
8. Speed of Light: https://www.youtube.com/watch?v=WHb8gEh7jA8

9. General Theory of Relativity: https://www.youtube.com/watch?v=8zgA0jar6X4

10. X-Rays: https://www.youtube.com/watch?v=muAmqX1Mr7I

11. Gravitational Lens: https://www.youtube.com/watch?v=bhP-d-1oK0w

12. Models of Atom: https://www.youtube.com/watch?v=lO0gpJr0vBY

14. Special Relativity: https://www.youtube.com/watch?v=uxLZ6SxSsK0

15. Compton Scattering: https://www.youtube.com/watch?v=oaKdCcsJw0o

16. Black-Body Radiation: https://www.youtube.com/watch?v=8XtHg4xq2hw

17. de Broglie Wavelength: https://www.youtube.com/watch?v=_hRet9mxtgI

The researcher write down each pre-service teachers' view after application. According to participant:

1. The Digital Storytelling can be used for Distance Education activities (13 participant),
2. The use of Digital Storytelling on YouTube helped their learning(13 participant)
3. Digital Storytelling served as a learning aid (10 participant)
4. Using the Digital Storytelling as a distance education tool will be efficacious (13 participant)
5. Digital Storytelling allowed them more creativity in designing projects and assignments(10 participant).

DISCUSSION

It has become a necessity of information age to raise generations that have technology literacy and use technology effectively. In addition to enriching teaching new contents,
The use of technology can be used to arouse interest and improve motivation (Sen, 2001). Nonetheless, along with raising individuals who have skills to use technology effectively, organized study materials for individuals should be produced as well. These may include videos, online learning environments, distance education tools and interactive technologic tools. What is more, it is a must that methods that consider individuals’ technology literacy, interest, needs and motivations should be employed. Digital storytelling may be one of these methods to fulfil the need. Indeed, Hathorn (2005) indicated that creating digital stories increases learner’s motivation and appears to enable individuals to gain hands-on experience. Whereas Tsou, Wang and Tzeng (2006) pointed out that digital storytelling achievement and interest, Dogan and Robin (2008) denoted that digital storytelling increases learner’ motivation and engagement. In addition, Sadik (2008) emphasized that the employment of digital storytelling fosters learning course content and improves technology use, collaboration and communication skills.

Some researchers highlighted that physics subjects are difficult to learn and individuals have difficulty comprehending abstract concepts. In particular, subjects such as photoelectric effect, general creativity, blackbody radiation, Compton scattering that comprise abstract concepts are highly baffling for the learners. It is quite important to develop and use teaching activities that can prompts learner’s visuals ideational perception in the process of teaching such concepts (Tas, Kose and Cepni, 2006). Producing digital stories about these subjects and enabling patterns, videos, music and animation that associate these subjects with real life to the learners will provide significant opportunities. To illustrate, individuals generally have difficulty in perceiving expressions of such concepts as curving space-time by mass, how the untouched objects manipulate the space-time, and how they show different movements like this, warping direction of the light by gravity and how this situation independent with characteristic of light, and how there is difference curve effect between stagnant and rotating celestial bodies. Yet in digital stories about this subject given on the link “General Relativity: https://www.youtube.com/watch?v=PlEmTnb90IE”, how mass curve the space-time, how light is warped its direction by effect of the gravity, how curving of the stagnant and rotating celestial bodies to space time differ each other’s is explained effectively along with music, audio and animation. This may enable individuals to easily figure out subjects that are difficult to learn. Not only with this digital story but also other given digital stories in this study can provide the best understandings to students about modern physics concepts.

When we regard students’ achievement and interest in physics lesson in particular and their views on physics in general, it seems that digital storytelling as a distance education tool may bring out remarkable contributions somewhat. Indeed, view rates of 17 videos shared in Youtube channel may be an indication of this assumption. Similarly, as stated by Blas, Garzotto, Paolini and Sabiescu (2009) digital storytelling allows the students to gain interest in subject matters that mostly seem dull. Moreover, digital components may make the subject more enthralling.

CONCLUSIONS

Since today individuals have technologic devices such as smart phones, computers and internet, the use of digital storytelling as a distance education tool and publishing these stories may lead to considerable contributions. Anyone who feels like researching or exploring subject in physics can get through digital stories simply via internet access without the need to be present in teaching-instruction environment independent from time and space. Digital stories with high quality of teaching and learning traits may allow individuals to satisfy their curiosity about subjects. Therefore, it demonstrates that digital stories could be used as distance education tool in physics instruction.

As a result, teaching-instruction should not be any longer regarded as an activity applied merely in classroom. By employing today’s technologies, individuals can attain knowledge
anywhere and anytime they require. The knowledge may be in various forms such as text, audio, visual and their combination.

In sum, considering the importance of physics in real life, physics is one of the foremost disciplines that individuals need. However, subjects of physics should be attracting, clear and comprehensible. For this purpose, knowledge about physics subjects should appeal to multiple senses and should be available to individuals anytime and anywhere. Digital storytelling, consisting of audio-visual-music-animation and shared online, is one of the methods that can meet this need. Hence, the use of digital storytelling as a distance education tool in physics instruction bears great significance when it is considered that everyone will be able to reach digital stories without any restriction of space and time if digital stories are shared online.

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**BOOK REVIEW**

**BUILDING VIRTUAL COMMUNITIES OF PRACTICE FOR DISTANCE EDUCATORS**

Written by M. Aaron Bond and Barbara B. Lockee

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Chapter 1 - Introduction:
This book is written to develop a set of guidelines for creating a virtual community of practice for faculty teaching at a distance that can easily be implemented by faculty development professionals. For the purposes of this book, community of practice (CoP) and ADDIE model are used as theoretical frameworks:

- A community of practice (CoP), as described by cognitive anthropologists Jean Lave and Etienne Wenger, consists of a group of people who share an interest, a craft, and/or a profession (Lave & Wenger, 1991; Wenger, 1998). Communities of Practice are the evidences including family units, social organizations, academia, and the workplace.
- Designing a virtual community of practice can be operationalized by using the ADDIE model to guide the process. Based on an instructional systems design process, the ADDIE model emphasizes the five core elements of the instructional systems design process namely analyze, design, develop, implement, and evaluate (Richey, Klein, & Tracey, 2011).

The ideas in this book are explained within three key elements. In this connection, Wenger, McDermott, and Snyder (2002) identified three key elements that foster a well-rounded community: domain, community, and practice. Domain refers to the shared repertoire of the community, community addresses the interaction and role definition of members, and practice is the knowledge building and sharing efforts required for a Community of Practice to thrive. Sherer, Shea, and Kristensen (2003) expanded the Wenger et al. model by further defining each element:

- The domain: A community of practice is not just a group of friends. Involvement in the community requires some knowledge and some competence in the focus area, or domain.
The community: Members of the community interact and learn together, they engage in joint activities and discussions, help each other, and share information.

The practice: Members of the community develop a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems in short, a shared practice (Sherer et al., 2003).

This book is intended to be a guide or handbook for building a faculty community of practice. The purpose of the guidelines is to provide a research-based framework for many shareholders to design Communities of Practice at their respective institutions. With this in mind, the book is organized according to the different phases of design as delineated by the ADDIE model, with chapters corresponding to each phase of design. Chapters are further organized into subsections addressing each of the three fundamental elements for designing a Community of Practice: domain, community, and practice.

Chapter 2 - Analysis:
This chapter explains the analysis phase of the ADDIE model. This chapter will explore mapping common analysis phase tasks with critical activities for developing a Community of Practice. According to literature, the analysis phase is defined as a high operational priority, both in terms of the frequency and diversity of comments (Ozdilek and Robeck, 2009). Common tasks undertaken during the analysis phase include conducting a gap or needs analysis, identifying stakeholders, and defining the scope of the project (Morrison et al., 2010; Richey et al., 2011). Efforts in analysis phase can help determine whether a Community of Practice for faculty teaching at a distance will help solve specific problems that individual institutions, departments, or faculty.

Chapter 3 - Design:
This chapter deals with issues regarding design phase. This chapter explores the creation of a road map by discussing the formation of organizational objectives and instructional objectives, the creation of evaluation materials that assess stated objectives, and the selection of tools that may effectively facilitate a virtual community of practice.

Chapter 4 - Develop:
This chapter provides a guideline for develop phase and further explores the unique development strategies for building a virtual community of practice for faculty teaching at a distance. Common tasks in the development phase include designing interactions, creating instructional materials, and building required mechanisms and processes.

Chapter 5 - Implement:
This chapter is about implementation. The chapter explores the many tasks required for an effective launch and execution of a thriving Community of Practice. The implementation phase usually involves communicating plans to learners, planning the logistics of instruction, and preparing the support for learners, instructors and any other key personnel involved in the educational process (Larson and Lockee, 2014). Implementation tasks for building a Community of Practice include facilitation, trust building, member recruitment, and ongoing training.
Chapter 6 - Evaluation:
This chapter deals with the final phase of the ADDIE model. This chapter explores how a Community of Practice for teaching faculty might be evaluated in the areas of domain, community, and practice. Evaluation ensures that the all components of design are addressing the gap or need, while providing for continuous improvement. Evaluating a Community of Practice requires a systematic plan that is specific to the community being evaluated. Evaluation must occur through all phases of community design from conception through implementation and continuously through maintenance (Schwier et al., 2007). Designed communities often fail because they are not valued as contributors to the knowledge of the organization but rather as social gatherings or groups (Wenger, 2010).

Chapter 7 - Conclusion and Next Steps:
The final chapter provides an overall understanding for the ADDIE model. It is stated that communities of practice for faculty teaching at a distance may provide opportunities for professional development and support. Guidelines for designing a virtual Community of Practice demonstrate how research-based tasks may be mapped to the design tasks in the ADDIE model.

These guidelines can be used by many to provide effective and efficient learning opportunities. Implementation of the guidelines is the appropriate next step in the development process of this framework. Given that design and development research is a continuous process of implementation and evaluation, the next phase of this study should test the guidelines in the field to explore how best to implement them, determine their feasibility, and identify any potential issues (Jonassen, Cernusca, & Ionas, 2007). As a final remark, it is stated that future research and testing is needed to contribute related literature of Community of Practice.

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The term of “flexible learning” means that the learner’s any time and any place involvement of the learning process without limitations on time and location. It can be said that flexible learning opportunities are provided for the learners via digital environments as open and distance learning environments. By this means, the learners can reach the learning contents without having to be in a particular location. Therefore, it can be seen that learning environments having flexible structures are important points for efficiently learning.

The book “Flexible Pedagogy and Flexible Practice” are especially distance learning centered, and contain compilations of worldwide instructor’s essays about flexible learning. The theme of the book and the twenty three articles in it are about the subject of flexibility in education and learning. Every presented essay provides different points of view about flexible learning like positive-negative and philosophic-practical points of view. This book, which is a compilation of different essays, also discusses the effects of the interactions between technology and learning environments and concentrates on learning technologies.

The purpose of the compilation process is to form new perspectives about flexible learning. In this sense, the encountered difficulties of instructors defending the flexible learning process are emphasized. A second reason is to express how to
make use of flexible learning processes with a global perspective. It can be said that these objectives can be followed out with the remarks of different experiences of groups.

Thirty-five authors from nine different countries have given contributions to this widely ranged compilation in the perspective of education and learning. This book, made as a compilation, consists of five different chapters.

The first chapter consists of three different essays that explaining the concept of flexibility. The essays present detailed information about the subjects of how flexibility was understood in the 21st century, how learners comprehend flexible learning processes, the configuration of flexible learning processes and the layout selection.

The second chapter consists of four essays that focused on the difficulties of flexibility. The subdivisions of the studies in this chapter are; Flexible Distance Learning for Social Transformation, The Policies Needed in the Process of Flexible Learning, Learning Processes and Productivity, Asian Higher Education, Existing Cultural Perception about the Subject of Flexibility and Flexibility and Openness in New Zealand.

The third chapter consists of nine subdivisions that focusing on difficulties in postsecondary education, achievements-failures in change implementation and flexibility. These subdivisions are as follows: Before the Fall: Breaking Rules and Changing Minds, Implementing an Online System: Voices of Experience, Adding Flexibility to Higher Education Using OERs: Lessons from the Open University, From “Here” to “There”: The Rocky Road to Flexibility, Where Has the Effort Gone?: The Quest to Sustain Momentum, An Elephant’s Lifetime: The Patience of Job, The Garden of Learning Delights: The Librarian’s Tale, Reflecting on Swamp Life, Mapping the Driving and Restraining Forces on Flexibility in Higher Education.

The fourth chapter consists of three essays that focusing on the benefits of chance and natural balances that affect systematic change. These essays are subtitled under The Fog of Flexibility: The Riskiness of Flexible Post-secondary Education in Australia, Flexing Costs and Reflecting on Methods, “Which Is to Be Master”? : Reflections on Ethical Decision Making.

The fifth chapter indicates that there is a balance in anthology by presenting three perspectives like the difficulties faced and things to take into consideration for the ones who support flexibility in learning. The studies in this chapter are compiled and subtitled under: The Paradoxes of Flexible Learning, Transformational Technologies: Exploring Myths and Realities, “Plenty of Saps”, What Happens in the Stretch to Flexibility?

The conclusion is written by Elizabeth Burge, Chère Campbell Gibson and Terry Gibson who do the editing in this book. In this chapter, a proper synthesis is presented by the three authors who do the editing in the book for the readers to deeply understand the practical and theoretical parts of flexible learning.
Rather than an individual effort, the process of the formation of the book is obtained from thirty five authors and three editors. In this sense, it can be said that this book which is arranged with multi perspectives, is a valuable source especially for the ones who enable their learning process through distance learning.

Flexibility can evoke different meanings for different individuals. With the development of technology, the term “flexibility” is also expanding and it allows learners in the process of learning to learn and teach comfortably. Flexibility is based on context and as the studies in the book state; it is at the same time seen as a concept which is acutely influenced by geography, language, culture, political ideas, economy and global structured relationships. As we get closer to a global perspective, social flexibility and adaptability become more important. This book where the subject of flexibility in learning environments is talked about is seen as an important source because of its ability to show the changeable nature of flexibility and complex contents.

At the same time, this book is important for graduate and undergraduate learners because of its importance in terms of educational leadership, instructional design, learning theories and extensive learning practices. The book is arranged to form an interactive debate platform about the difficulties of flexibility provided by the learning process. Every chapter in the book is centered upon the necessity of flexible learning environments.

This book which is a compilation of essays about flexibility in the learning process, is an important study in terms of starting and supporting common debates about flexibility in the learning process.

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