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**REVIEW:Online Distance Education: Towards A Research Agenda Edited by Olaf Zawacki-Richter and Terry Anderson**
Dear TOJDE Readers,

Welcome to announce a special message to you as readers and authors at the beginning of this issue. Each TOJDE article has got its DOI number since January 2014 issue and next issues. You can check DOI number near pdf files in every article. TOJDE will continue to give DOI numbers for the articles in the forthcoming issues.

There are 12 articles and 1 book review in this issue. Articles are written by 25 authors from 9 different countries. These countries are Bangladesh, Brazil, Greece, India, Iran, Turkey, Ukraine, USA and Zimbabwe. Besides, a book is reviewed by 2 reviewers from Turkey.

The 1\textsuperscript{st} article, titled EVIDENCES OF VALIDITY OF A SCALE FOR MAPPING PROFESSIONAL AS DEFINING COMPETENCES AND PERFORMANCE BY BRAZILIAN TUTORS, is written by Dr. Francisco Antonio COELHO JUNIOR, Dr. Rodrigo Rezende FERREIRA, Dr. Tatiane PASCHOAL, Dr. Cristiane FAIAD, and Dr. Pedro Paulo Murce MENESES. This study assesses evidences of construct validity of the Brazilian Scale of Tutors Competences in the field of Open and Distance Learning and examines if variables such as professional experience, perception of the student’s learning performance and prior experience influence the development of technical and attitudinal competences.

THE RELATION BETWEEN DISTANCE EDUCATION STUDENTS’ MOTIVATION AND SATISFACTION is the 2\textsuperscript{nd} article and written by Dimitrios GOULIMARIS. The aim of the study, within the frame of self-determination theory (SDT), was triple: a) to examine the structural validity of the “Situational Motivation Scale” (SIMS) in the field of distance education, b) to investigate the correlation between the subscales of the motivation and satisfaction of students who attend distance education classes and c) to examine the possibility of predicting the subscales of satisfaction from the subscales of motivation in the open and distance education. The findings of this research allow a better understanding of the motivation process, which explains the satisfaction of the students, while attending a class.

The 3\textsuperscript{rd} article is written on STUDENTS’ EVALUATION OF GOOGLE HANGOUTS THROUGH A CROSS-CULTURAL GROUP DISCUSSION ACTIVITY by Michiko KOBAYASHI. The study investigated perceived ease of use and usefulness of Google Hangouts as an instructional/learning tool and provides suggestions for how Google Hangouts can be integrated into online classrooms based on the findings.

The 4\textsuperscript{th} article is conducted by Elina ANAGNOSTOPOULOU, Ilias MAVROIDIS, Yiannis GIOSSOS, and Maria KOUTSOUBA. This article is titled STUDENT SATISFACTION IN THE CONTEXT OF A POSTGRADUATE PROGRAMME OF THE HELLENIC OPEN UNIVERSITY. The aim of this study is to empirically examine the correlation between student satisfaction from their studies and three important distance learning factors in a blended distance education environment, namely the student-tutor interaction, the performance of the tutor and the course evaluation by the students.

FACTORS MOTIVATING PRESERVICE TEACHERS FOR ONLINE LEARNING WITHIN THE CONTEXT OF ARCS MOTIVATION MODEL is the 5\textsuperscript{th} article. This article is written by two authors: Serkan IZMIRLI and Ozden SAHIN IZMIRLI. This study determines the factors motivating pre-service teachers for online learning within the context of ARCS motivation model.
The 6th article is titled OPEN AND DISTANCE LEARNING TOWARDS THE ERADICATION OF ILLITERACY OF THE TEA-GARDEN WORKERS IN BANGLADESH: Problems and Prospects by two authors. The authors are Sodip ROY and Md. Abdus SATTAR. They focus on tea garden workers and solving their learning needs via distance education.

The 7th article in this issue is written by Dr. Tolga GOK. The title of this article is THE EVALUATIONS OF THE COLLEGE STUDENTS’ PERCEPTIONS ON DISTANCE EDUCATION FROM THE POINT OF THE TECHNICAL AND EDUCATIONAL FACTORS. This research article investigates the college students’ opinions about distance education courses.

The 8th article is CAUSES OF LOW STUDENT ENROLMENT AT THE ZIMBABWE OPEN UNIVERSITY’S HARARE-CHITUNGWIZA REGION FOR THE PERIOD 2008 and -2013 is the 8th article. David BISHAU and Wellington SAMKANGE are the authors of this article. This study sought to identify the causes of low student enrolment at the Zimbabwe Open University’s (ZOU) Harare- Chitungwiza Region was conducted.

The 9th article is conducted by Dr. Ozcan OZYURT and titled AN ANALYSIS ON DISTANCE EDUCATION COMPUTER PROGRAMMING STUDENTS’ ATTITUDES REGARDING PROGRAMMING AND THEIR SELF-EFFICACY FOR PROGRAMMING. This study aims to analyze the attitudes of students studying computer programming through the distance education regarding programming, and their self-efficacy for programming and the relation between these two factors.

The 10th article, titled CAVL: Does it develop learner’s attitude?, is written by Hojjat MALEKI, Ali Aaghar GHASEMI, and Mehdi MOHARAMI. This study investigates the extent to which a Computer-Assisted Vocabulary Learning (CAVL), Mandegar, can improve learners’ perceptions about the program. The findings might have important implications for decision makers and teachers to further involve Computer-Assisted based programs to increase Language learning.

The 11th article this article is DESIGN AND DELIVERY OF ONLINE COURSES IN YCMOU is written by Chetana H. KAMLASKAR and Dr. Manoj KILLEDAR. As Learning is a collaborative process, authors have suggested additional strategies to be incorporated by ‘real teacher’ to offer ‘Online Course’. This will help to ensure better quality and to develop confidence, comfort, and experience in online teaching.

The 12th article is written by Natalia KONONETS. The title of this article is EXPERIENCE IN IMPLEMENTING RESOURCE-BASED LEARNING IN AGRARIAN COLLEGE OF MANAGEMENT AND LAW POLTAVA STATE AGRARIAN ACADEMY. This study is focused on free hosting for the development of electronic learning resources (Jimdo, uCoZ), which enable the creation of a site (does not require special skills and knowledge of programming languages), fast and, most importantly, free of charge, which is particularly important given the current financial support of agricultural colleges.

There is a book review in this issue. The book, titled ONLINE DISTANCE EDUCATION: TOWARDS A RESEARCH AGENDA, is edited by Olaf Zawacki-Richter and Terry Anderson. This book is reviewed by Aras BOZKURT and Ela AKGUN-OZBEK.

Hope to meet again in the next issue of TOJDE,
Cordially,

Dr. T. Volkan YUZER
Editor-in-Chief
EVIDENCES OF VALIDITY OF A SCALE FOR MAPPING PROFESSIONAL AS DEFINING COMPETENCES AND PERFORMANCE BY BRAZILIAN TUTORS

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ABSTRACT

The purpose of this study was twofold: to assess evidences of construct validity of the Brazilian Scale of Tutors Competences in the field of Open and Distance Learning and to examine if variables such as professional experience, perception of the student’s learning performance and prior experience influence the development of technical and attitudinal competences. Participants were 200 tutors (69 males and 131 females), residents in the Northeast of Brazil (46%), aged between 18 and 56 (\(\mu_{age}=22, SD=8.69\)). The vast majority of tutors (84.5%) exercise other professional activities or beyond the academic tutoring.

The scale consists of two factors: a) attitudinal competences and b) technical competences. Results from exploratory factor analysis provided evidence of construct validity. Additionally, results indicated that tutors who had previous experienced and who believed in the students’ distance learning scored higher than those belonging to other groups (less experienced tutors and tutors who had no belief in students’ learning distance learning).

Also, results indicated that those who had former experience presented a statistically higher score towards the factor “technical competences”. Overall, the study underlines the necessity of adaptation and usage of such an questionnaire of competences in other global contexts, not just the Brazilian one.

The relationship between individual performance and student learning should be investigated in a cross-cultural research.

Keywords: Technical Competences, former experience, perception of student learning, individual differences, attitudinal competences.
INTRODUCTION

The term competence is being investigated in different ways in studies related to organizational behavior, sometimes referring to an attribute of the individual, or as a variable typical of the context of organizations. Much has been discussed on the scientific literature. Especially in the field of knowledge management, authors have pointed the possibilities of application of these concepts to organizational studies (for example see Rodriguez, Patel, Bright, Gregory & Gowing, 2002, and Teodorescu, 2006), and its objectification as an important practice of managing people in organizations (Baartman, Bastiaens, Kirschner & Van der Vleuten, 2007).

Several Brazilian organizations has been investing heavily in the development of remote instructional systems, where the presence of tutors is essential to the full success of online learning. It is essential that these organizations have a reliable tool in order to obtain empirical data to justify any improvement actions and / or encourage the accumulation of competences oriented towards tutor performance.

The Brazilian literature on organizational behavior (for example see Meneses, Coelho Jr., Paschoal, Ferreira & Isidro-Filho, in press) presents a profusion of studies on the mapping and analysis of competences in the context of work organizations. However, a significant proportion of those studies is theoretical, or unsystematic and prescriptive, without the proposition and empirical testing of instruments and models of management of competences. Considering these reasons, is important to develop methods and techniques required to improve the management of competences, particularly in the mapping phase, as a way of adding value to the business of the organization.

The diagnosis is even more complex when it identifies that for certain occupational positions study competences is still infancy, as is the case of tutors who work in distance education. These social actors have been widely required by Brazilian organizations, especially given the advent and consolidation of new information technologies and communication applied to business scenarios.

It is essential, therefore, considering the Brazilian context, a validated measure oriented mapping of professional competences of tutors who work in distance education modality. The objective of this work consists in proposing and empirically testing a scientifically measure oriented mapping of professional competences of 200 Brazilian tutors who work in distance education. We will show here the evidences of validity of this Brazilian scale.

The scale has validity, consistency and reliability to be used in the Brazilian organizations and should be applied in other organizations worldwide.

There is broad scientific field of the study on work applied competences (Le Deist & Winterton, 2005; Redmond, 2013). However, there is no consensus about what, in fact, this term means, and how best to operationalize it (Jackson; Cooper-Thomas; van Gelderen; Davis, 2010).

The Brazilian literature on competence, in essence, is about concepts of delivery, complexity, adding value and job design. The concept of delivery is important, as presented by Boyatsis (2008), and so is its relationship with individual and organizational performance.

Competencies are the result of mobilization of knowledge by the individual (Campion; Fink; Ruggeberg; Carr; Philips; Odman, 2011; van der Klink, Boon, 2002). It means a combination of inputs and it expresses that individual competence when at work triggers an outcome resulting from the application of the knowledge, skills and attitudes (KSA).
Santos, Coelho Junior and Faiad (2011) complement this definition by emphasizing that the competence at work is facilitate to the individual when developing their assignments and responsibilities effectively. Competence is about the mobilization of the individual in the use of KSA's to achieve a better performance at work.

Competence in the workplace is understood as an individual's ability to produce results in accordance with organizational or occupational goals and objectives. Thus, competencies represent synergistic combinations of knowledge, skills and attitudes expressed by the professional performance within a given organizational context and conform determined levels of exigency.

Professional competence is demonstrated by individual performance at work and involves not only the individual behavior but also includes some context variables, like emotional and material support. Professional competencies are defined by the use of benchmarks of performance. It is expected that individuals demonstrate competence through observation and analysis of their behaviors at work.

Sandberg (2000) and Carbone, Brandão, Leite and Vilhena (2009) further reinforce the French zeitgeist provided by Boyatzis, that professional skills are the set of SKAs expressed by professional performance in the organizational environment. These competences add value to both the individual and the organization and act as a bridge between the individual attributes and organizational strategy.

Professional competence refers to performance, mobilization and labor contribution to organizational strategy. In this perspective, like as Le Boterf and Zarifian discussed, the concept of competence is thought of as a set of knowledge, skills and attitudes that justify a high performance and superior signal quality.

Professional competences are exercised when individuals act in work contexts, serving as a bridge between their behaviors and organizational strategy. Thus, competences can add economic and social value to individuals and organizations. As their contribution to the organizational objectives are achieved and to be socially recognized the capacity of individuals, teams and organizations. The skills here shall be construed as technical, linked to the performance of the duties of the guardian, and behavioral, affective and attitudinal nature. More information about the mapping of the competences can be found in Coelho Junior, Faiad, Borges e Rocha (2013).

Considering the occupational role of the Brazilian tutors it is expected that they have the expertise required to use the virtual learning environment (VLE) and that they excel in the use of new technologies of communication and information. Furthermore, they are expected to be friendly with students and with the other social actors involved in distance learning.

METHOD AND PROCEDURE

Participants
The sample consisted of 200 tutors (69 males and 131 females), residents in the Northeast of Brazil (46%), aged between 18 and 56 (\(M_{age}=22, SD=8.69\)). The vast majority of tutors (84.5%) have other professional activities or beyond the academic tutoring. It was also identified also that 187 individuals, or 93.5 %, had some type of training to act as a tutor in distance education. In addition, for the purposes of the study, the sample was divided into groups according to the Professional experience and perception of the students learning performance.
Table: 1
Demographic characteristics of the sample

<table>
<thead>
<tr>
<th>Sex</th>
<th>Time job as a tutor</th>
<th>Have you been trained to be a tutor?</th>
<th>Do you think the student of distance education learn?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>34,5%</td>
<td>&lt;1 54 27,5%</td>
<td>Yes 187 93,5%</td>
</tr>
<tr>
<td>Women</td>
<td>65,5%</td>
<td>1-3 113 56,5%</td>
<td>No 13 6,5%</td>
</tr>
<tr>
<td></td>
<td>&gt;-3 32 16%</td>
<td></td>
<td>No 12 6%</td>
</tr>
</tbody>
</table>

Characteristics of the Questionnaire and Steps of Construction
The first version of the scale was built considering Brazilian empirical reports on competencies and according to the international literature.

The construction of the measure of professional tutor competence occurred in a series of workshops with Brazilian tutors who had already worked in distance education. We conducted 24 semi-structured interviews (individual and focus groups) with tutors teachers who worked at the undergraduate and specialization levels with the Open University of Brazil (a national Brazilian government program) within the University of Brasilia/Federal District. These interviews were made in order to conduct the survey of professional competence.

Open University of Brazil is a national Brazilian Program offered by the Government. It is a consolidated system for public universities that was implemented in 2006. The OUB offers higher level courses to the Brazilian community by the open modality, mainly for sections of the population who have difficult access to classroom education or to graduate school.

We tried to identify the competences and knowledge required to accomplish tasks. It was asked of each interviewee that they recount critical incidents or difficulties they faced in the course of their work and what steps they took for the resolution of those.

Procedures
All participants were informed of the objectives of this work and gave informed consent for their spontaneous participation. The information has been processed in confidential and anonymous way, and individuals were informed of the interviews, individual or in group, would be recorded for specific use in research.

The content analysis allowed the extraction of information that led to the mapping of technical and behavioral competencies expected in competent performance of the function of mentoring for individuals who work in distance education. We used the recommendations of two acknowledged Brazilian researchers, Brandão and Bahry (2005), for identifying and building competences (aggregate a verb, a condition and a measurable criterion of performance). We constructed a first version of a fully structured questionnaire for online application considering the content analysis made. The items of the instrument were analysed as to their accuracy, reliability, clarity, parsimony and objectivity. A thorough analysis of the instructions for instrument use was performed to avoid bias in the interpretative guidelines of the instrument, which could hinder the fulfillment of this.

Due to the difficulty of obtaining a random Brazilian sample we opted for convenience and affordability sampling. First of all we chose to send these emails only to tutors who worked
in distance learning courses (undergraduate Public Administration, post-graduate in Public Management and post-graduate in Healthcare Management courses) offered by the Department of Administration at University of Brasilia. We used a database containing the names and emails of the tutors. Data were stored in a database and procedures of exploratory factor analysis (internal consistency, exploratory factor analysis, reliability and variance explained, among others) were performed. The structure of the scale considers the empirical analysis of the main components, as well as analysis of multicollinearity and factorability matrix. Extent of intercorrelation was considered -above 0.30, distribution of eigenvalues-scree plot, Bartlett 's sphericity test- AIC, with p <0.001 and analysis of KMO. Subsequently Principal Axis Factoring (PAF) method was used, with oblique rotation (direct oblimin) to verify the correlations between factors, proceeding to the calculation of factor scores.

It is noteworthy that there are different types of criteria for determining the number of factors, which may be reduced to three: statistical criteria (by tests of significance), conventional criteria and the theoretical relevance of the component or factor. These three previous criteria were used together with other criteria for factor determining the matrix: eigen values > 1, minimum of 3 % of the variance explained, scree plot, determination of loads and factor scores (>0.32), analysis correlation factor (greater burden than 0.30 indicates a trend of clustering factors), analysis of internal consistency (Cronbach's alpha) and finally interpretability of the empirical solutions.

RESULTS

Factor Analysis of the Competence Questionnaire
For the examination of the structural validity of the competence questionnaire, a main principal axis factoring analysis of the main axes was used. Some items are exemplified in table: 2.

Table: 2
Empirical structure of the competence questionnaire

<table>
<thead>
<tr>
<th>Example of Questions</th>
<th>Attitudinal and Behavior Competences</th>
<th>Technical Competences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to act with flexibility (adjust me, appropriately, the new facts, concepts or situations)</td>
<td>,75</td>
<td></td>
</tr>
<tr>
<td>Ability to act with versatility (I adjust myself to new situations, adapting myself to various circumstances)</td>
<td>,73</td>
<td></td>
</tr>
<tr>
<td>Ability to act with ethics and professional behavior (act with decency, honesty and integrity, according to moral and ethical standards established).</td>
<td>,72</td>
<td></td>
</tr>
<tr>
<td>Ability to act with initiative (propose solutions and/or act immediately and effectively in a situation)</td>
<td>,69</td>
<td></td>
</tr>
<tr>
<td>Ability to act proactively (envision situations, seeking solutions to problems or conflicts).</td>
<td>,69</td>
<td></td>
</tr>
<tr>
<td>Apply exercises students, correcting them in a timely manner.</td>
<td>,76</td>
<td></td>
</tr>
<tr>
<td>Identify the student’s question, in the discussion forums or at other times in order to make clear answers to the questions posed in order to optimize the tutor-student interaction</td>
<td>,76</td>
<td></td>
</tr>
<tr>
<td>I demonstrate mastery of the content to be taught in order to better answer the doubts and questions of the students.</td>
<td>,76</td>
<td></td>
</tr>
<tr>
<td>I have ability to seek, in the literature, related to discipline theory, enabling me to research and</td>
<td>,69</td>
<td></td>
</tr>
</tbody>
</table>
answer any questions students with readiness and agility
I am able to motivate the student, providing .68
feedback (negative and / or positive) answers
to all exercises, chats and forums

<table>
<thead>
<tr>
<th>Total number of questions</th>
<th>44</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Variance Explained</td>
<td>33.4%</td>
<td>6.26%</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>23.380</td>
<td>4.385</td>
</tr>
<tr>
<td>Cronbach´s Alpha</td>
<td>0.96</td>
<td>0.93</td>
</tr>
</tbody>
</table>

Reliability Analysis
In table: 2, there is a concise presentation of the reliability control results, concerning the
competence questionnaire. The analysis showed that in relation to Attitudinal and Behavior
Competences the Alpha Cronbach coefficient was .96 and in relation to technical competences a Cronbach coefficient was .78. The results indicated that the questions in
both factors had a very satisfactory internal cohesion.

Variance Analyses for Independent Samples Towards More Than One Factors
From the variance analysis towards two independent factors, the "Professional experience"
and "perception of the student´s learning performance", there appeared to be statistically
important interaction between them and the attitudinal ($F_{3,026}=0.153; p=0.003 <0.05$) and
technical competences ($F_{3,608}=0.258; p=0.001 <0.05$). The anova multiple comparison that
the tutors who had previous professional experience believed in students’ learning through
distance education scored higher than tutors belonging in the other groups (less
experienced tutors, and tutors who had little or no belief in students’ learning through
distance education).

T-test Analyses for Independent Samples
To check whether there were statistically important differences towards the two
competence factors "attitudinal/behavior" and "technical", owed to former experience of the
participants tutoring distance education, T-tests for independent samples, were performed.
The results indicated that former experience constitutes a differentiation element towards
the factor "technical competence” (table 3).

<table>
<thead>
<tr>
<th>Factors</th>
<th>T</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudinal/Behavior Competences</td>
<td>-.69</td>
<td>198</td>
<td>.009</td>
</tr>
<tr>
<td>Technical Competences</td>
<td>-.76</td>
<td>198</td>
<td>.002</td>
</tr>
</tbody>
</table>

From the means, it was indicated that those who had former experience presented a
statistically higher score ($M=4.5, SD=.41$) towards the factor “technical competences” in
relation to those who did not ($M=4.3, SD=.55$).

DISCUSSION
The scale oriented by mapping professional competences of Brazilian tutors proved to be a
reliable and valid measure. It may allow for the investigation of the issues related to the
operation and use of new tutoring skills in the workplace.
A suggestion for future research concerns the development of a measurement instrument specifically dedicated to the identification of psychosocial factors expressed by Brazilian tutors and students studying at distance modality. An important variable, for example, concerns the attitude of these social actors against the distance education.

We hypothesize that positive attitude towards distance learning can stimulate the commitment on the part of both tutors and students, promoting the maximization of learning. In addition values, strategies for teaching, learning and commitment to distance education also deserve to have constructed and validated measures along the lines of this article. We hypothesize that they can help to explain the acquisition of competences and performance of both (tutors and students).

It is recommended that a scale to measure the problems of transfer of learning or obstacles to retention and transfer of new knowledge and competences in students’ activities be created. Qualitative methodology can even be an interesting technique in this sense, since it could be used to further investigate the behaviors related to inhibition of usage of knowledge acquired via distance education.

Another variable that can be incorporated into studies Brazilian tutors’ competences refers to the support provided to learning and transfer. Support explains significant portion of the variability of transfer of formal or informal learning, measured in terms of impact of the content learned in the subsequent performance.

It is imperative, therefore, that the environment in which the tutor performs their tasks and the degree of support provided to learning among students be scientifically studied. It is indispensable to study the factors that facilitate implementation of contents learned in distance education.

Among the contributions of this study is that of building and validating a Brazilian scale that can be used in different contexts of evaluation of distance learning. We believe that mapping the professional skills of the tutors can also help improve the academic and pedagogical management systems courses this type of modality, hence improving students’ performance.

Another contribution concerns the proposition of a consolidated variable in the Brazilian literature on organizational behavior, competences, applied to an innovative teaching method whose boundaries seem to be endless in their global reach. The measure even can be a starting point to cover similar gaps in organizational literature from other countries. The methodology of data collection, entirely conducted through remote means by e-mail in all regions in Brazil, can also be considered an important contribution of this study.

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REFERENCES


THE RELATION BETWEEN DISTANCE EDUCATION STUDENTS' MOTIVATION AND SATISFACTION

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ABSTRACT

The aim of the present study, within the frame of self-determination theory (SDT), was triple: a) to examine the structural validity of the “Situational Motivation Scale” (SIMS) in the field of distance education, b) to investigate the correlation between the subscales of the motivation and satisfaction of students who attend distance education classes and c) to examine the possibility of predicting the subscales of satisfaction from the subscales of motivation in the open and distance education. The sample consisted of 144 students who participated in the course of “Arts II: Overview of Greek Music and Dance” of the Hellenic Open University. For the purposes of the study, two scales were used: a) The modified Greek version (Papaioannou et al., 2007) of the “Situational Motivation Scale” (SIMS) (Guay et al., 2000), b) The modified Greek version (Theodorakis, & Bebetsos, 2003; Bebetsos, & Theodorakis, 2003) of the “Scale of Satisfaction” (Chelladurai & Riemer, 1997).

The results of the research are considered positive for the adjustment of the instrument measuring the motivation of students in distance education. Identified regulation and intrinsic motivation presented high values, as much as the two subscales of satisfaction: personal outcome and leadership. Extrinsic motivation presented middle levels and the subscale amotivation, very low levels. The subscale personal outcome is connected positively to the self-determined forms of motivation and negatively to those which are less self-determined.

Finally, it has been found that intrinsic motivation and amotivation are subscales which predict personal outcome and leadership. In conclusion, the findings of this research allow a better understanding of the motivation process, which explains the satisfaction of the students, while attending a class.

Keywords: Distance education, motivation, satisfaction, leadership, personal outcome.

INTRODUCTION

The rapid development of new technologies and their utilization in the frame of distance education offer new possibilities and change the way of studying many scientific topics (Nikolaou & Koutsouba, 2012). The use of distance education in learning kinetic skills and especially dancing, which requires complex kinetic abilities, presents a lot of difficulties (Koutsouba & Giossos, 2006).
This is due to the nature of the topic and the necessary personal guidance, required by the instructor (Goulimaris, 2008; Masmanidis, Gargalianos & Kosta, 2009).

In order to transmit dancing skills and their cultural context, distance methodology can apply the simultaneous utilization of various educational techniques such as notation, the use of new technologies and new educational methods (Voutsina, Goulimaris, Bonatos & Genti, 2009). In Greek tertiary education, the only lesson connected to dancing which is available through open and distance education is “Arts II: Overview of Greek Music and Dance”, taught by the Hellenic Open University, which is the first tertiary institute in Greece, offering organized studies through distance education. This particular subject can be attended by fourth-year students of the undergraduate educational program “Studies in Greek Culture”. The content of the subject concerns the acquisition of knowledge on dance and music, but offers no kinetic skill development. Students in the frame of their studies prepare four papers, guided by their teacher from a distance and participate to the final exam.

While the Hellenic Open University was still operative, many researches were carried out, investigating the various aspects of distance education procedure. Thus, the investigated subjects concerned the way students evaluated the syllabus, the auxiliary services provided, the instructors and the research material provided in various subjects of the undergraduate study program, as much as the intention of the students to participate in post graduate courses (Goulimaris, 2011; Melita, Goulimaris & Stoupakis, 2005). Furthermore, students were asked on a series of subjects such as: the role and the mission of the Hellenic Open University teachers, the importance of the relationship between students and teachers, the emotional and educational support of the students (Anastasiadis, & Karvounis, 2010), the role of the communication between students and teachers in its various dimensions (face to face, telephonic, or electronic communication, speed of communication, resolving questions, study strengthening and effective organizing of time) (Iliadou & Anastasiadis, 2010), the general support given to the students, (Vasala, & Andreou, 2010), the teachers’ communicational skills, their knowledge of their teaching subject, as much as the understanding and solving of the students’ problems and the feedback offered during papers (Vasiliou-Papageorgiou, & Vasala, 2005).

THEORITICAL FRAMEWORK

The last few years, special emphasis was given by the researchers to the motivation of individuals both in the frame of educational procedure and, more generally, in the frame of recreational activities (Tsitskari, Tzetzis, & Vernadakis, 2014). According to many theories, the motivation of individuals does not differ only in relation to the percentage of motivation but also in relation to its kind. The concept of motivation was given many definitions.

According to Hoy and Miskel (1982), the achievement of personal goals through a combination of needs, tendencies, forces and urges, which lead the individual to express and maintain a voluntary activity, is defined as motivation. Harrison, Blakemore, Buck and Pellet (1996) relate the concept of motivation to the desire of an individual to satisfy a need, to achieve a goal or to try and surpass him/herself or somebody else.

The tendency of individuals to try and satisfy their needs and achieve their goals constitutes the idea of motivation for Robbins (1998). Similarly, Weinberg and Gould (2003) define motivation as the tension and direction of an individual’s
efforts. For Doganis (1990), motivation possesses powers which act either extrinsically or intrinsically and activate an individual’s behavior. This behavior can be affected by motivation, but it is distinguishable from motivation. Motivation exists as long as an individual tries to satisfy his/her needs and stops as soon as the needs are satisfied. Deci (1975) separated the motivation factors into intrinsic and extrinsic.

To better explain the concept of motivation Deci and Ryan (1985) developed the Self-Determination Theory (SDT) which, in fact, is the development of the Cognitive Evaluation Theory (CET). According to CET, the actions that increase an individual's perception about his/her skills increase his/her intrinsic motivation and vice versa. The lack of perception about one’s skills leads to amotivation. The innate need of individuals to feel capable and autonomous in their environment instigates their behavior intrinsically.

SDT offers a theoretical background for the research of motivation in people who participate in an activity, investigating the reasons for doing so. According to this specific theory, motivation can be distinguished as intrinsic, extrinsic and amotivation (Deci & Ryan, 2000; 2004). This means that those who take part in an educational process have different levels of self-determination and motivation. The study of motivation helps us understand how attractive educational process and subjects can be. The more autonomy is given to a participating individual, the more his/her motivation and willingness to participate increases (Deci & Ryan, 1985). Cases of pressure and obligation elicit the contrary results (Deci & Ryan, 2000). According to the SDT, intrinsic motivation is found on the highest levels of self-definition and amotivation is found on the lowest levels of self-definition (Deci & Ryan, 1985; 1991). Extrinsic motivation is found on the middle levels of the scale.

Intrinsic motivation concerns behaviors which express the pleasure and satisfaction deriving from their own execution and not from any rewards (Deci & Ryan, 1985). The sense of pleasure and satisfaction experienced by an individual who participates in an activity is a defining factor for the concept of intrinsic motivation (Ryan, 1982). Extrinsic motivation concerns behaviors which are carried out in order for an individual to achieve a result or a certain reward, such as a prize, a high score, a certain fee or the occupation of an executive post. A type of extrinsic motivation which is found on relatively high levels of self-determination is the identified regulation in which, individuals are motivated because they believe that their participating in an activity is important and brings out merits and values without, nevertheless, enjoying this participation adequately (Deci & Ryan, 1985). This would be the case of somebody participating in dance activities, just to improve his/her physical condition.

Amotivation, which is found on the lowest levels of the self-determination scale, refers to behaviors which are not motivated by neither intrinsic nor extrinsic factors and there is a lack of willingness due to a sense of incapability (Deci & Ryan, 1985). Thus, an individual is considered to be intrinsically motivated when dealing with an activity because of pleasure and extrinsically motivated when dealing with an activity for reward or praise. Amotivated individuals are neither intrinsically nor extrinsically motivated because they feel that they are incapable of controlling a situation. According to the SDT, motivation derives from an intrinsic motivation due to a high self-determining environment, in opposition to amotivation, which derives from a constantly decreasing self-determining environment. Motivating factors that lead to increased levels of efficacy are the concepts of intrinsic motivation and
identified regulation, which must be kept on high levels (Papaioannou, Theodorakis, & Goudas, 2003).

Research findings connect intrinsic motivation and identified regulation to the pleasure felt during the lesson and the increased desire for participation, which leads to positive learning results while extrinsic motivation and amotivation to the lack of motives, which leads to negative learning results (Hagger, Chatzisarantis, Culverhouse, & Biddle, 2003; Kolovelonis, & Dimitriou, 2007; Laios, Theodorakis, & Gargalianos, 2003a; Ntoumanis, 2001, 2002; 2005; Standage, Duda, & Ntoumanis, 2005).

Many researchers from different scientific fields have study the concept of satisfaction. Satisfaction is a multidimensional term, which is defined as a psychological concept that includes the pleasure deriving from the acquisition of what somebody hopes to get from a product or a service (Pizan, & Ellis, 1999) and as the reaction of a consumer to the conceived difference between expectations and final result, after the consumption (Millan, & Esteban, 2004).

The satisfaction of the customers and the satisfaction of the personnel were the two different directions that the researchers and executives, concerning the employment field, focused the interest of their studies. Most important was considered the satisfaction of the customers since it was found to positively influence the buying attitude of the customers (Granny, Smith, & Stone, 1992). According Kotler (1991) customer satisfaction is the most important indication for the profitability of an organization. The model “expectation-no confirmation” (Oliver, 1980) reinforced the studies on the consumers’ satisfaction. According to this model, a customer is satisfied when he/she feels that the efficacy of the product or service is what was expected. If the efficacy of the product is beyond expectations, then the customer is positively disconfirming, while if it is of lower efficacy than expected, the customer is negatively disconfirming.

Highly satisfied customers are unlikely to abandon an organization, since they develop emotional bonds (Kotler, 2004) and a psychological commitment (Tsitskari, & Tsakikari, 2013). Realization of the expectations or needs of an individual after the end of a provided service is connected to the positive feeling of satisfaction, since a product or service is evaluated according to such factors (Alexandris, & Palialia, 1999).

The concept of satisfaction especially in the field of management has been very popular including the dimensions of personal outcome and leadership (Theodorakis & Bebetsos, 2003). The above conceptual definition is based on need satisfaction (Chelladurai & Riemer, 1997). The term “need satisfaction” has been widely used in theoretical models of satisfaction, it is related to motivation and it is produced when an individual has satisfied specific needs and/or motives (personal outcome & leadership), through his/her participation in various activities (Mannell, 1999). Many studies accept as precondition that the students are the basic customers for the educational institute (Hill, 1995; IWA, 2007; Sakthivel et al., 2005; Zairi, 1995). Institutional commissions must always take into consideration the students’ satisfaction due to the intense competition among institutional bodies (universities, colleges etc), as well as the globalization, the increasing confidence of the “customers” in higher educational institutes, the raise of the tuition and the classification of education as a marketable service (Kwek et al., 2010).
Students’ satisfaction helps them to build up confidence, which contributes to the acquisition of knowledge and the development of useful dexterities (Letcher & Neves 2010). A series of researches examined the relation of satisfaction to the various aspects of educational process and motivation of students (Hassan, Malik, & Khan, 2013; Karadag, et al., 2012; Myers; & Goodboy, 2014; Pan, 2013), which states the importance of the above concepts and their interaction.

SDT has been the theoretical frame, for the realization of the relative researches. The principles of SDT have been confirmed throughout the investigation of the relations among perceived need support from physical education teachers, need satisfaction, intrinsic motivation and physical activity (Zhang, et al., 2011). In addition, according to Filak and Sheldon (2008), teacher autonomy can better predict both self-determined student motivation and their psychological need satisfaction, a fact that finally led students to higher grades.

The aim of the present study was triple: a) to examine the SDT and more specifically the structural validity of the “Situational Motivation Scale” (SIMS) in the field of distance education, b) to investigate the correlation of the subscales of motivation and satisfaction of students who attend distance education classes, and c) to examine the possibility of predicting the subscales of satisfaction from the subscales of motivation in the open and distance education.

METHOD

Participants
The sample consisted of 144 students (55 males and 89 females) who participated in the course of “Arts II: Overview of Greek Music and Dance” of the Hellenic Open University, aged between 25 and 67 (μ\text{age}=42, SD=7.62). The sample was divided into groups according to the age (table 1).

<table>
<thead>
<tr>
<th>Sex</th>
<th>Age group</th>
<th>25-37</th>
<th>38-45</th>
<th>46-49</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>38,2%</td>
<td>46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>61,8%</td>
<td></td>
<td>52</td>
<td></td>
</tr>
<tr>
<td></td>
<td>46-&gt;</td>
<td></td>
<td></td>
<td>31,9%</td>
</tr>
</tbody>
</table>

Measures
For the purposes of the study, two scales were used:

- The modified Greek version (Papaioannou et al., 2007) of the “Situational Motivation Scale” (SIMS) (Guay et al., 2000). It included 16 items, starting with the basic statement "Why were you engaged in the projects of the lesson?" and contained four subscales: a) "intrinsic motivation" 4 items (e.g., “because I believe that they were interesting”), b) “identified regulation” 4 items (e.g., “I do it for my own good”), c) “extrinsic motivation” 4 items (e.g., “because I feel that I have to do them), and d) “amotivation” 4 items (e.g., I didn’t know; I didn’t see what they bring to me). Answers were given on a 5-point Likert type scale, ranging from 1=I totally disagree, up to 5=I totally agree.
The modified Greek version (Bebetsos & Goulimaris, 2014) of the "Scale of Satisfaction" Inventory (Chelladurai et al, 1988; Bebetsos, & Theodorakis, 2003). It included 10 items, starting with the basic statement: "How satisfied/dissatisfied are you from……..“ and contained two subscales:

- leadership, which dealt with the way students perceive the leading profile of the teacher during the lesson. This subscale consisted of seven items (e.g., "the way my teacher treats me") and
- personal outcome, which included three items related to the personal outcome of the student in the lesson (e.g., "my personal development and growth"). The students could answer each items through a 7-point Likert type scale, from absolutely dissatisfied (1) to absolutely satisfied (7).

Data analysis
In the beginning, descriptive statistics were carried out. Then, exploratory factor analysis was used, to examine the structural validity of the Situational Motivation Scale (SIMS).

Pearson correlation analysis and hierarchical regression analyses were conducted to examine the relationship between motivation and satisfaction.

RESULTS

Descriptive Statistics
Descriptive statistics, as means and standard deviations are presented in table 2. The results show a high level of identified regulation (M=4.28, SD=.61) and intrinsic motivation (M=3.85, SD=.76).

Amotivation was found to be low (M=1.93, SD=.82). The scores for extrinsic motivation (M=3.07, SD=1.30) levels were moderate.

<table>
<thead>
<tr>
<th>Subscale</th>
<th>M</th>
<th>SD</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic motivation</td>
<td>3.95</td>
<td>.76</td>
<td>.80</td>
</tr>
<tr>
<td>Identified regulation</td>
<td>4.28</td>
<td>.61</td>
<td>.80</td>
</tr>
<tr>
<td>Extrinsic motivation</td>
<td>3.07</td>
<td>1.30</td>
<td>.81</td>
</tr>
<tr>
<td>Amotivation</td>
<td>1.93</td>
<td>.82</td>
<td>.86</td>
</tr>
<tr>
<td>Personal outcome</td>
<td>6.04</td>
<td>.77</td>
<td>.78</td>
</tr>
<tr>
<td>Leadership</td>
<td>6.65</td>
<td>.43</td>
<td>.92</td>
</tr>
</tbody>
</table>

Factor Analysis
For the preliminary examination of the structural validity of the “Situational Motivation Scale” (SIMS) in the field of distance education, exploratory factor analysis was used.
The analysis of the responses of the sample on the 16 items of SIMS resulted in 4 subscales with eigenvalues greater than 1 and accounting for 72.81% of the variance.

The results suggest the 4 subscales: intrinsic motivation (.69 -.83), identified regulation (.70 -.90), extrinsic motivation (.79 -.87) and amotivation (.71 -.91). The structural validity of the “Satisfaction Scale” has already been validated in the field of distance learning in Greece (Bebetsos, & Goulimaris, 2014). The internal consistency of the two scales measured with Cronbach’s alpha. Results showed that all subscales showed acceptable internal consistency since Cronbach's α was higher than .77 (table 2).

Correlation Analyses

Table 3 shows the Pearson correlations between the subscales of satisfaction and motivation. Personal outcome was significantly related to extrinsic motivation ($r=-.24**; p<.05$), intrinsic motivation ($r=.41**; p<.01$), amotivation ($r=-.37**; p<.01$) and identified regulation ($r=.33**; p<.01$). Leadership was significantly related to intrinsic motivation ($r=.33**; p<.01$), amotivation ($r=-.32**; p<.01$) and identified regulation ($r=.31**; p<.01$). Finally leadership was not significantly related to extrinsic motivation ($r=-.18; p > .05$).

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Personal outcome</th>
<th>Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Extrinsic motivation</td>
<td>-.24*</td>
<td>n.s.</td>
</tr>
<tr>
<td>2. Intrinsic motivation</td>
<td>.41**</td>
<td>.33**</td>
</tr>
<tr>
<td>3. Amotivation</td>
<td>-.37**</td>
<td>-.32**</td>
</tr>
<tr>
<td>4. Identified regulation</td>
<td>.33**</td>
<td>.31**</td>
</tr>
</tbody>
</table>

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

Hierarchical Regression Analyses

Results from hierarchical regression analysis that concern personal outcome are presented in Table: 4.

In the analysis, intrinsic motivation was entered at Step 1; amotivation was entered at Step 2; identified regulation was entered at step 3; and Extrinsic Motivation was entered at Step 4.

The subscales of intrinsic motivation in Step 1, significantly accounted for the 13% of the total variance of personal outcome, $R^2\text{Change}=.13, F(1,80)=11.50, p<.001$ and amotivation in Step 2, significantly accounted for the 7% of the total variance of personal outcome, $R^2\text{Change}=.07, F(2,80)=7.06, p<.05$.

Overall, the subscales accounted for the 21% of the total variance of personal outcome.
Table: 4
Hierarchical regression analysis for personal outcome

<table>
<thead>
<tr>
<th>Step</th>
<th>Prediction of personal outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Variables entered</td>
</tr>
<tr>
<td>1</td>
<td>Intrinsic motivation</td>
</tr>
<tr>
<td>2</td>
<td>Intrinsic motivation</td>
</tr>
<tr>
<td></td>
<td>Amotivation</td>
</tr>
<tr>
<td>3</td>
<td>Intrinsic motivation</td>
</tr>
<tr>
<td></td>
<td>Amotivation</td>
</tr>
<tr>
<td></td>
<td>Identified regulation</td>
</tr>
<tr>
<td>4</td>
<td>Intrinsic motivation</td>
</tr>
<tr>
<td></td>
<td>Amotivation</td>
</tr>
<tr>
<td></td>
<td>Identified regulation</td>
</tr>
<tr>
<td></td>
<td>Extrinsic motivation</td>
</tr>
</tbody>
</table>

*p<.001, *p<.05.

Results from hierarchical regression analysis that concern leadership are presented in table 5. In the analysis, intrinsic motivation was entered at Step 1; amotivation was entered at Step 2; identified regulation was entered at step 3; and extrinsic motivation was entered at Step 4. The subscales of intrinsic motivation in Step 1, significantly accounted for the 11% of the total variance of leadership, R² Change=.11, F(1,79)=9.23, p<.05 and amotivation in Step 2, significantly accounted for the 5% of the total variance of leadership, R² Change=.05, F(2,79)=4.44, p<.05. Overall, the subscales accounted for the 18% of the total variance of leadership.

Table: 5
Hierarchical regression analysis for leadership

<table>
<thead>
<tr>
<th>Step</th>
<th>Prediction of leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Variables entered</td>
</tr>
<tr>
<td>1</td>
<td>Intrinsic motivation</td>
</tr>
<tr>
<td>2</td>
<td>Intrinsic motivation</td>
</tr>
<tr>
<td></td>
<td>Amotivation</td>
</tr>
<tr>
<td>3</td>
<td>Intrinsic motivation</td>
</tr>
<tr>
<td></td>
<td>Amotivation</td>
</tr>
<tr>
<td></td>
<td>Identified regulation</td>
</tr>
<tr>
<td>4</td>
<td>Intrinsic motivation</td>
</tr>
<tr>
<td></td>
<td>Amotivation</td>
</tr>
<tr>
<td></td>
<td>Identified regulation</td>
</tr>
<tr>
<td></td>
<td>Extrinsic motivation</td>
</tr>
</tbody>
</table>

*p<.05.

DISCUSSION

One of the aims of this study was the structural validity of the “Situational Motivation Scale” (SIMS) in the field of distance education. The results of the factor analysis confirmed the existence of four subscales. Similar results were presented in past researches. The same four factors were used in other researches, as well (Digelidis, Kotsaki & Papaioannou, 2005; Mizios, Digelidis, Goudas &
Papaioannou, 2009; Papaioannou, Milosis, Kosmidou & Tsigilis, 2007). Furthermore, the high internal cohesion of the four factors certifies the credibility of the scale. This means that more researchers, teachers or administrative executives of academic institutes, could use the specific instrument in order to measure the level of motivation of their students. Additionally, analysis supported past research results of the validity of the “Satisfaction Scale” Inventory for distance education (Bebetsos, & Goulimaris, 2014).

In the present study, the factors which are considered as most motivating, that are identified regulation and intrinsic motivation, present high mean terms. The factor amotivation presents very low values and the factor extrinsic motivation presents middle values. Personal outcome and leadership also present high values. This result is indicative of the fact that students have found the lesson pleasant, interesting, amusing and important for them and that they participated because of a personal decision. It seems that identified regulation, intrinsic motivation, personal outcome and leadership are the four basic factors which contribute to student development, during classes. Similar finding are presented in the studies of Ntoumanis, (2001; 2002; 2005), Hagger, Chatzisarantis, Culverhouse and Biddle, (2003), Standage, Duda and Ntoumanis, (2005), were intrinsic motivation and identified regulation are connected to results such as pleasure in class and intention for future participation, while extrinsic motivation and amotivation are connected to results such as lack of pleasure and a sense of pressure.

The present findings show that the correlation of personal outcome, intrinsic motivation and identified regulation are statistically important in a positive way, while extrinsic motivation and amotivation are statistically important in a negative way. This shows that students’ personal performance is influenced positively by self-determining forms of motivation and negatively by forms which are less self-determining. The positive relation between intrinsic motivation and identified regulation has also been confirmed in a research by Papaioannou, Theodorakis and Goudas (2003).

Also, the factor leadership is statistically important and positive, in relation to intrinsic motivation and identified regulation, and is statistically important and negative, in relation to amotivation. As for extrinsic motivation, it is of no statistical importance for leadership. This demonstrates the perception of the students about the leader profile of the teacher during the lesson influences positively the self-determining forms of motivation and decreases accordingly their amotivation. There is enough bibliography concerning studies on the type of leadership and the student satisfaction (Laios, Theodorakis & Gargalianos, 2003b; Nazarudin, Fauzee, Jamalís, Geok & Anuar, 2009; Pilus & Saadan, 2009; Riemer & Toon, 2001).

The percentages of the overall prediction of the subscales personal outcome and leadership from the subscales of motivation maintain low levels (21% and 18% accordingly). It seems that students’ personal outcome can be predicted by their intrinsic motivation, as far as pleasure and personal satisfaction is concerned, but it can also be predicted by other factors which are not connected directly to motivation subscales, such as the way a lesson is conducted. This is in line with findings in other study about the significant roles that intrinsic motivation play in increasing students’ satisfaction (Ferriz, Sicilia, & Sáenz-Álvarez, 2013).

Finally, very interesting results were presented by regression analysis on the part of leadership. More specifically, intrinsic motivation was one of the two subscales that predicted leadership. Past research indicated that good and effective leadership is
associated with task oriented individuals in physical education classes (Papaioannou, Milosis, Kosmidou, & Tsigilis, 2002; Soini, Liukkonen, Watt, Yli-Piipari, & Jaakola, 2014). The students of the present research recognized that their teacher/leader profile is mainly intrinsic motivated.

In addition, very interesting were the following results were the second subscale that predicted leadership, was amotivation. Even though students were amotivated on participating in the specific course, they recognized their instructor’s leadership profile within the course. Past research results also agree (Vlachopoulos, Letsiou, Palaiologou, Leptokaridou, & Giguoli, 2010).

In conclusion, the findings of the study are considered positive for the adjustment of the instrument measuring the motivation of students in the open and distance education. They also allow a better understanding of the motivational process, which explains the satisfaction of the students while participating in a class. A further examination of other factors such as the quality of the studies and the quality of the institute, which can influence satisfaction, are considered necessary.

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STUDENTS’ EVALUATION OF GOOGLE HANGOUTS THROUGH A CROSS-CULTURAL GROUP DISCUSSION ACTIVITY

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ABSTRACT

The study investigated perceived ease of use and usefulness of Google Hangouts as an instructional/learning tool. Forty-two teacher education students at U.S and Japanese universities participated in an online cross-cultural activity using Google Hangouts and discussed cultural differences between the two countries and their teaching philosophies. After the activity, students responded to a survey to evaluate the ease of use and usefulness of Google Hangouts. Qualitative data were also collected through the survey to examine their overall learning experience. The results indicated that Google Hangouts is a useful instructional tool, but not easy to use. Although technical problems occurred during the conference, the activity provided valuable experiences for both U.S. and Japanese students. The study provides suggestions for how Google Hangouts can be integrated into online classrooms based on the findings.

Keywords: Videoconference, computer mediated communication, online learning.

INTRODUCTION

Videoconferencing has been recognized as an effective delivery method in distance education and used at different grade levels. Despite the bandwidth limitation, many researchers agree that videoconferences add a human touch to online learning and decrease the psychological distance between students (Lim, Cha, Park, Lee, & Kim, 2012). Communication through live videos also enhances authentic student-student interaction (Smyth, 2011). Smyth identified connectivity as a critical factor in mediated learning environments and maintained that in order to promote student learning, instructors must provide a platform where students can meet and exchange information freely in both asynchronous and synchronous formats. Computer-mediated interaction can minimize the feeling of isolation among remote students and can promote a sense of community (Ferguson, 2010). Stewart, Harlow, and DeBacco (2011) also claimed that the use of live videoconferences not only increases interaction between the instructor and students, but also gives real time attention to remote students.

Videoconferences also benefit students in other ways. Living in the global society, it is important to develop a multicultural perspective and to be able to work effectively with people from different cultural backgrounds. In particular, teacher candidates must develop this skill to support diverse learners in their future classrooms. Due to the growing number of immigrants, many teacher education programs in different countries offer or even require multicultural education courses (Acquah & Commins, 2013; Keengwe, 2010).
However, a study showed that students living in less diverse communities tend to exhibit negative attitudes towards multicultural education (Dunn, Dotson, Ford, & Roberts, 2014). BaŞbay (2014) claimed that interaction with other cultures improves students’ cultural awareness and helps them develop respect and appreciation for differences. Videoconferences can increase the opportunity for cross-cultural experiences, connecting students of different races and ethnicities without the need to leave their homes.

Google Hangouts is one of the videoconference systems available through Google Plus (Duffy, 2013). Some educators have integrated it into online and hybrid classrooms (Isaacson, 2013; Roseth, Akcaoglu, & Zellner, 2013). Google Hangouts is similar to Skype, as it provides a free audio/video conference along with a text chat capability. Both programs offer a free mobile app, making it easy for iPad, iPhone, or Android users to access the programs. However, Google Hangouts also has other unique features. Unlike Skype, Google Hangouts is free for a group conference. Anyone who has Google Plus accounts can join the group conference. Videoconferences on Google Hangouts can be recorded and uploaded to YouTube for sharing. The user can decide whether to share videoconferences publicly or only with friends. In addition, Google Hangouts also allows screen captures, screen shares, and remote desktop control, allowing users to control a computer monitor from the other end of the room during the videoconference (Google Inc., 2013).

In selecting an appropriate videoconference system, instructors should consider various factors. The system should be affordable, easy for students to use, and useful for enhancing instructional effectiveness and student learning. Although technology experts can provide reviews of new software and programs and help us learn their functionalities, instructors should also listen to student concerns so that they can adopt the technologies effectively to support student learning. Google Hangouts is a relatively new system and has not been used widely in educational settings. Therefore, the present study aims to examine students’ perceptions of the ease of use and usefulness of Google Hangouts as an instructional tool in a cross-cultural activity.

METHODS

Participants of the study were undergraduate and graduate students in teacher education programs at U.S. and Japanese universities. They engaged in an online activity using Google Hangouts to learn about each other’s cultures and to discuss teaching philosophies. Both universities are located in rural areas where student populations are not diverse.

All U.S. participants were enrolled in an education class delivered through a learning management system, and the Google Hangouts activity was part of their required course assignments. Japanese students were not enrolled in the course but voluntarily participated in the activity. After the researcher received a list of Japanese participants from a Japanese professor at a partnership university, she formed 11 groups consisting of two U.S. and two Japanese students each.

Although all Japanese participants were English education majors, their conversational English skills were still limited. Therefore, meeting in groups, rather than one-on-one was expected to reduce their anxiety about miscommunication. The instructor also assigned one U.S. student from each group to serve as a group facilitator.

All participants received a handout explaining the procedures of the activity and how to use Google Hangouts. While all U.S. participants already had accounts with Google
through their university, many of them had never used them and did not even know how to access and activate their accounts. Most Japanese students did not have Google accounts. Once all participants created Google Plus accounts, the instructor asked them to create circles for their groups. Creating a circle is one unique capability of Google Hangouts and it allows students to interact with multiple participants within the groups.

The next step was to email the group facilitators. Each student was required to email available hangout times to the group facilitators by the assigned due date. Based on the information received from each group member, the group facilitators set their meeting times. During the activity, students discussed several assigned topics, including their perceptions of positive and negative aspects of U.S. and Japan and their teaching philosophies. U.S. students were also required to learn two Japanese phrases from their Japanese partners. The duration of the videoconference was about 45 minutes to one hour.

In this study, the researcher adopted the perceived ease of use and usefulness scales developed by Davis (1989). While a number of researchers have conducted path analysis and have added new constructs to the original model (Lee, Hsieh, & Hsu, 2011; Svendsen, Johnsen, Almås-Sørensen, & Vittersø, 2013; Teo, 2012), the purpose of this study was to assess the ease of use and usefulness of Google Hangouts. Therefore, the researcher only utilized the original scales for these two constructs. The survey also included an open-ended question (What is your overall learning experience with the cross-cultural activity using Google Hangouts?) and collected students’ demographic data and prior experiences in Google Hangouts and other videoconference systems. The survey was voluntary and was distributed to all 42 participants. The researcher performed descriptive analysis for each construct and examined students’ narrative comments.

RESULTS

A total of 29 students (17 U.S. and 12 Japanese) responded to the survey. Of the 29, 17 were males and 12 were females, and more than half of the students were between the ages of 21 and 23. In terms of prior experience with Google Hangouts, 24 students said that they had never used it and five students said that they had used it only a few times before. Most students reported that they had little or no previous experience using other web conference systems, such as Skype.

Descriptive Analysis

Table: 1 shows the frequency data for ease of use items. Overall, students’ responses were mostly positive. The percentage of positive responses (a combination of students who responded strongly agree, moderately agree, and somewhat agree) for each item ranged from 55.1% to 86.4%. Among the seven items, “good functionalities” demonstrated the highest percentage of combined positive responses, and “mental efforts not required” was the lowest. The percentage of positive responses including all seven items was 68%. Both “mental efforts not required” and “easy to use” also showed the highest percentage of negative responses (a combination of somewhat disagree, moderately disagree, and strongly disagree) (24.1%).
Table: 1
Frequency for Ease of Use

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Moderately agree</th>
<th>Somewhat agree</th>
<th>Neutral</th>
<th>Somewhat disagree</th>
<th>Moderately disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear Understandable</td>
<td>3 (10.3)</td>
<td>8 (27.6)</td>
<td>8 (27.6)</td>
<td>5 (17.2)</td>
<td>3 (10.3)</td>
<td>2 (6.9)</td>
<td>0</td>
</tr>
<tr>
<td>Mental Effort Not Required</td>
<td>6 (20.7)</td>
<td>3 (10.3)</td>
<td>7 (24.1)</td>
<td>6 (20.7)</td>
<td>2 (6.9)</td>
<td>3 (10.3)</td>
<td>2 (6.9)</td>
</tr>
<tr>
<td>Easy to Use</td>
<td>5 (17.2)</td>
<td>7 (24.1)</td>
<td>9 (31.0)</td>
<td>1 (3.4)</td>
<td>4 (13.8)</td>
<td>2 (6.9)</td>
<td>1 (3.4)</td>
</tr>
<tr>
<td>Do What I Want</td>
<td>3 (10.3)</td>
<td>9 (31.0)</td>
<td>6 (20.7)</td>
<td>5 (17.2)</td>
<td>4 (13.8)</td>
<td>2 (6.9)</td>
<td>0</td>
</tr>
<tr>
<td>Flexibility</td>
<td>5 (17.2)</td>
<td>7 (24.1)</td>
<td>9 (31.0)</td>
<td>3 (10.3)</td>
<td>3 (10.3)</td>
<td>2 (6.9)</td>
<td>0</td>
</tr>
<tr>
<td>Perform Task</td>
<td>3 (10.3)</td>
<td>5 (17.2)</td>
<td>10 (34.5)</td>
<td>5 (17.2)</td>
<td>3 (10.3)</td>
<td>2 (6.9)</td>
<td>1 (3.4)</td>
</tr>
<tr>
<td>Good Functionalities</td>
<td>7 (24.4)</td>
<td>11 (37.9)</td>
<td>7 (24.1)</td>
<td>4 (13.8)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>32 (15.8)</td>
<td>50 (24.6)</td>
<td>56 (27.6)</td>
<td>29 (14.3)</td>
<td>19 (9.4)</td>
<td>13 (6.4)</td>
<td>4 (.4)</td>
</tr>
</tbody>
</table>

Note. N=29. Numbers in brackets indicate percentage.

Table: 2 shows the frequency data for usefulness items. The percentage of combined positive responses for each item ranged from 69% to 93%. With all six items together, the percentage of combined positive responses was 78%, which was higher than that of ease of use responses (68%).

Among the six items, students responded to “potential instructional tool” most positively. Although the combined positive responses for “increase interaction” accounted for the lowest percentage, the highest number of students selected “strongly agree” for this item. It is also notable that students responded most negatively to the same item (24%). Lastly, 20% of students did not find Google Hangouts “useful for live video lecture” and responded to the item negatively.
### Table: 2
Frequency for Usefulness

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Moderately agree</th>
<th>Somewhat agree</th>
<th>Neutral</th>
<th>Somewhat disagree</th>
<th>Moderately disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Increase Interaction</strong></td>
<td>10 (34.5)</td>
<td>2 (6.9)</td>
<td>8 (27.6)</td>
<td>2 (6.9)</td>
<td>5 (17.2)</td>
<td>1 (3.4)</td>
<td>1 (3.4)</td>
</tr>
<tr>
<td><strong>Collaboration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Productive</td>
<td>7 (24.1)</td>
<td>7 (24.1)</td>
<td>8 (27.6)</td>
<td>5 (17.2)</td>
<td>1 (3.4)</td>
<td>1 (3.4)</td>
<td>0</td>
</tr>
<tr>
<td>Enjoyable</td>
<td>7 (24.1)</td>
<td>9 (31.0)</td>
<td>7 (24.1)</td>
<td>5 (17.2)</td>
<td>1 (3.4)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Useful for</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Live Video Lecture</td>
<td>5 (17.2)</td>
<td>8 (27.6)</td>
<td>8 (27.6)</td>
<td>2 (6.9)</td>
<td>3 (10.3)</td>
<td>3 (10.3)</td>
<td>0</td>
</tr>
<tr>
<td><strong>Develop Sense of</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community</td>
<td>6 (20.7)</td>
<td>8 (27.6)</td>
<td>8 (27.6)</td>
<td>3 (10.3)</td>
<td>1 (3.4)</td>
<td>1 (3.4)</td>
<td>1 (3.4)</td>
</tr>
<tr>
<td><strong>Potential Instruct. Tool</strong></td>
<td>9 (31.0)</td>
<td>7 (24.1)</td>
<td>11 (37.9)</td>
<td>0</td>
<td>2 (6.9)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>44 (25.4)</td>
<td>41 (23.7)</td>
<td>50 (28.9)</td>
<td>17 (9.8)</td>
<td>13 (7.5)</td>
<td>6 (3.5)</td>
<td>2 (1.2)</td>
</tr>
</tbody>
</table>

*Note. N=29. Numbers in brackets indicate percentage.*

**Qualitative Analysis**

In the open-end question, students expressed their opinions about the ease of use and usefulness of Google Hangouts, and their feelings about the activity. Their responses varied, including both positive and negative feedback. However, in terms of the program’s technical aspects, comments were mostly negative.

The following statements were extracted from the survey:

- Video and audio were often cut off in the middle of conversations. However, many people around the world have Gmail accounts, and those Gmail users would find the program convenient, due to easy access to the program. Google Hangouts has much potential and certainly can connect many people and expand the global network. (Japanese student A)

- Google Hangouts can be a great tool but I have found it very hard to use and it was not easy for me to learn how to use as most computer related things have been for me in the past. I enjoyed talking with the students from Japan. I just wish Google Hangouts was easier to use or I received more training in how to use Google Hangouts. (U.S. student A)

- Many students expressed that it was difficult learning how to use Google Hangouts. They encountered technical difficulties during the activity and expressed frustration. Several students reported that technical problems interrupted conversations and that the chat
tool only worked intermittently. One student mentioned that the Google Hangouts interface was not user-friendly and that it was difficult to locate tools she needed. Another student said, “The learning curve with Google Hangouts comes from learning how to set up circles, but once that is accomplished the actual interaction functions seemed fairly easy to operate.” The initial set up for Google Hangouts circles seems to involve a complicated process and requires students to follow instructions carefully. One student pointed out:

If more teachers used it [Google Hangouts], it would be better used because students would know how to use it. I think that it is a good source to help with interaction. It’s really great for those kinds of things, but it's just another account that students are required to get for just one class and can be slightly irritating at times. (U.S. student B)

Conversely, there were also students who expressed positive feelings about the technical aspects of Google Hangouts. One student said, “I really like Google Hangouts and have found myself using it more than Skype nowadays. It seems to work more effectively and more often than Skype. I am glad that I had the opportunity to use it!” Another student said, “I love the app that is available for smart phones, it is very convenient.”

Both U.S. and Japanese students expressed positive feelings about the activity. Several students commented that a videoconference is better than audio-only or text chat and that it makes conversations easier. One Japanese student said, “It was a very meaningful activity because I don’t have many opportunities to interact with people from another culture. The activity made me want to learn English more.” Many U.S. students also enjoyed the conversations with Japanese students and appreciated the opportunity to meet with people from outside the United States. One student wrote, “It was very exciting and fun for me to do this activity. It was the highlight of my day and made me want to visit [Japan].”

**DISCUSSION**

This study investigated students’ perceived ease of use and usefulness of Google Hangouts in a cross-cultural activity. The quantitative data showed that students’ perceptions about Google Hangouts were mostly positive. Students rated ease of use higher than they rated usefulness. Many students struggled with Google Hangouts at the beginning, although they felt that the system itself had good functionalities. In their comments, they indicated a number of technical issues that they had encountered during the activity; most groups experienced audio and video problems of varying degrees. To reduce the number of sites logged into the same meeting room, the researcher asked Japanese student groups to enter their meeting rooms using one computer. Although only three sites (two U.S. sites and one Japanese site) logged into the same meeting room, connection problems still occurred. Further research is needed to determine whether the unstable connection was caused merely by a bandwidth issue or if it is associated with other Google Hangouts system problems. Based on the present study’s findings, when participants are spread throughout different countries, the researcher recommends one-on-one conferences. If group interaction is essential for the activity, the instructor might consider using an audio-only conference or text chat.

Other technical issues that students mentioned were associated with setting up a Google Plus account and creating a circle. The circle function makes it easy to contact group members and invite them to the meeting. As mentioned earlier, these processes were
confusing to many students. The majority of participants did not have Google Plus accounts and needed to create one to participate in the activity. The process of creating a circle required extra time and efforts. For the past few years, the researcher has also used Adobe Connect, a videoconferencing program similar to Google Hangouts, for her course activities. Because none of the students had experience using Adobe Connect, she provided detailed written instructions and had each student practice using Adobe Connect prior to starting the activity. Only a few students confused about how to use it and needed additional help. In this study, as previously mentioned, the researcher provided a similar instructional handout on how to use Google Hangouts, but many students were still frustrated learning how to use the program. Therefore, when instructors introduce Google Hangouts to students, they should use it throughout the course, not just for a one-shot activity. The more students use it, the more comfortable they will feel with the program. In addition to a written instructional handout, it would be helpful for instructors to provide a short instructional video.

Despite the technical problems mentioned earlier, many students felt that Google Hangouts was a useful instructional tool. Videoconferences are generally used in online classrooms to connect students and the instructor.

In this study, all U.S. participants were students enrolled in the online class and many of them had taken other online courses before. Therefore, they had probably used one or more online tools, such as discussion boards and Google Docs to interact online with instructors and peers.

Although U.S. students might be likely to accept use of videoconferences as an educational tool, none on the Japanese participants in this study had had online learning experience before because online courses were not offered at their university. Therefore, it might have been difficult for them to view videoconferences as instructional media. This could explain the disparity of the responses to “increase interaction” and the low rating of “useful for live video lecture” on the usefulness scale.

Finally, students’ comments indicated that the activity was enjoyable and that learning about differences and similarities between the two countries was a fun experience. The assigned topics, one of which was a discussion of their teaching philosophies, were relevant to participants’ future professions. Because they were about the same age, it was not difficult to pinpoint other common interests, such as music and sports. Furthermore, the synchronous videoconferences provided an environment similar to one in which students have face-to-face interaction with one another. Students commented that they felt more comfortable and closer to each other using this format than they did when using audio or text-only communication.

This study revealed that, despite the occasional interruption by technical problems, cross-cultural interaction through videoconferences still provides students with valuable learning experiences.

CONCLUSION

In online courses, instructors and students must rely on technology to communicate with each other. Choosing appropriate technology that meets the goal of the activity is important. The present study revealed that Google Hangouts may not be an easy program to learn, but it has the potential to be a useful instructional and collaborative tool. In summary, when Google Hangouts is used to facilitate online cross-cultural activities, the researcher provides the following suggestions:
Take time to train students on how to use the system and expect that some students may need additional support.

Provide at least several opportunities to practice using the program prior to the actual conference.

Use the program consistently throughout the course.

Design meaningful activities to engage students.

Use the program to facilitate a one-on-one activity, if possible, to reduce connection problems.

Have an alternative program ready, in case technical problems occur.

Research the country or the area where participants reside and consider using asynchronous technologies if the participants’ region has an unstable internet connection.

Both synchronous and asynchronous online tools have positive impacts on student learning (Borup et. al., 2013; Heeyoung & Johnson, 2012).

On some occasions, asynchronous communication formats may better meet the instructional objectives than real-time interactions would. Google Hangouts is a relatively new program, and there is not yet much literature that explores its application in instructional settings. In this study, only a small number of students responded to the survey after participating in the Google Hangouts activity.

The researcher recommends further investigation into Google Hangouts in a cross-cultural context. Students’ perceptions about Google Hangouts may vary, depending on their countries of origin.

Comparing different videoconference programs in one-on-one and group settings will help us identify technology appropriate for planned course activities.

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Website: http://www.suu.edu/faculty/kobayashi/
REFERENCES


### APPENDIX

**GOOGLE HANGOUTS SURVEY**

1. **Perceived ease of use**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My interaction with Google Hangouts is clear and understandable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Interaction with Google Hangouts does not require a lot of my mental effort.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I find Google Hangouts to be easy to use.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I find it easy to get Google Hangouts to do what I want it to do.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I find Google Hangouts to be flexible to interact with.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Learning how to perform tasks using Google Hangouts is easy.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Google Hangouts has good functionalities.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Perceived Usefulness

<table>
<thead>
<tr>
<th>1. Google Hangouts increases interaction with my classmates.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Somewhat agree, 6. Moderately agree, 7. Strongly agree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Google Hangouts makes online collaboration productive.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Somewhat agree, 6. Moderately agree, 7. Strongly agree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Google Hangouts makes online collaboration enjoyable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Somewhat agree, 6. Moderately agree, 7. Strongly agree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Live video lectures using Google Hangouts (will) help me learn class materials.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Somewhat agree, 6. Moderately agree, 7. Strongly agree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. Google Hangouts is effective to develop a sense of community among students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Somewhat agree, 6. Moderately agree, 7. Strongly agree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Overall, Google Hangouts has a potential as an instructional tool.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Somewhat agree, 6. Moderately agree, 7. Strongly agree</td>
</tr>
</tbody>
</table>

*Adopted from the perceived ease of use and useful scales developed by Davis (1989).
STUDENT SATISFACTION IN THE CONTEXT OF A POSTGRADUATE PROGRAMME OF THE HELLENIC OPEN UNIVERSITY

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ABSTRACT

The aim of this study is to empirically examine the correlation between student satisfaction from their studies and three important distance learning factors in a blended distance education environment, namely the student-tutor interaction, the performance of the tutor and the course evaluation by the students. The study involved 81 postgraduate students from a modular course of the School of Humanities of the Hellenic Open University (HOU). A questionnaire of 35 closed type questions was used. The majority of the students were satisfied from their studies, from the tutor's performance and from the communication and interaction with their tutor, while they also provided a positive overall course evaluation. Regarding the course evaluation, they would like the course programme to be better formulated and more clearly communicated. The data analysis yielded a significant, positive correlation between the satisfaction of the students from their studies and all three examined factors. Finally, there was a statistically significant difference on student satisfaction levels among different age groups, a statistically significant difference regarding the number of course modules attended in relation to the evaluation of the tutor's performance and a statistically significant difference regarding the number of Counseling Group Sessions (CGS) attended in relation to student satisfaction.

Keywords: Blended distance education, student satisfaction, tutor performance, communication, interaction, course evaluation.

INTRODUCTION

Teacher is an important agent in blended distance education; he does not only teaches but he also becomes a «creator» of learning environment a supporter and an advisor (Jones, 2007; Rogers, 1996). The teacher's (or tutor's) performance, the interaction and the communication with the students - either in the classroom (in the case of blended
learning systems) or at a distance (e.g. via email, telephone or an educational platform) - contributes significantly to the guidance and support of the student during his distant studies.

Student satisfaction is very important in distance learning courses, since students work in isolation from their teachers, their fellow students and the educational organization and therefore they are more susceptible to disappointment and the possibility to drop-out from their studies. Student satisfaction encompasses the feeling of pleasure that the students get when their learning needs are covered by an educational institution or programme (Allen, Bourhis, Burrell, & Mabry, 2002; Shehab, 2007; Wang, 2003). Satisfaction in learning is the students' pleasure of what they have accomplished so far, emanating mainly of their self-esteem and self-confidence. Self-esteem depends on three parameters: a) the trust to ourselves, b) our own image for ourselves and c) the love towards us (André & Lelord, 1999; Hambly, 2010). Self-confidence is the trust to our abilities in order to achieve our goals and visions (Wilde, 1980). The tutors' role is to promote, via creative educational action, the feeling of satisfaction and pleasure of the students. In order to perform correctly, the tutors themselves also have to feel self-esteem and self-confidence. In other words, the tutors must believe in themselves and their knowledge and respect themselves and their students (Reindhardt, 1960; Saman, 2004).

Drop-out rates in distance education courses, and especially online courses, are higher than those observed in conventional education (Frankola, 2001; Oblender, 2002). Therefore, it is very important to investigate the factors that affect student satisfaction in distance education courses, in order to improve the quality of teaching and of the services offered by the course provider and, therefore, reduce the drop-out rates and increase the academic performance of students. According to the theoretical model of Ali, Ramay and Shahzad (2011), student satisfaction is based on three factors: a) the interaction between students-and tutors, b) the performance of the tutors, and c) and the evaluation of the course. In particular, according to Zimmerman (2012), interaction has an important role in the learning process and is important both in conventional and in distance education. Especially in distance education, the student, precisely due to the lack of face-to-face communication with the tutor, needs support and guidance more than in conventional studies. The good and effective communication between the teacher and the student contributes to the gradual self-confidence of the second and consequently in the achievement of his goals. Furthermore, the tutor through communication covers the needs of the students both in the learning level as well as in the sentimental one (Keegan, 1986; Holmberg, 1995). Interaction also encompasses the constructive discussion between students and tutors, which is achieved through technological means, including synchronous communication. Moore (1993) emphasises that the right dialogue between the student and the tutor contributes towards a positive interaction and helps developing a good and efficient collaboration.

Additionally, Mason (1991) and Paulsen (1995) refer that the skills of the tutor are divided into three categories: a) organizational, b) social and c) intellectual. The tutors' purpose is to provide support and guidance to the distant learners in order not to abandon their studies. Friendliness, sincerity, warm smile, calm voice tone, patience and exchange of opinions are the main characteristics of the tutors’ role in open and distance education (Simpson, 2002).

The tutors' performance refers to their efficiency in teaching, i.e. to their scientific knowledge and social skills, as well as to the educational techniques with which they have to be familiar. Race (1993) stresses the importance of feedback, objectivity and of
making good use of model answers and assessment criteria, while he underscores the three-fold role of the distance learning tutor, i.e. teaching, assessing and counseling.

According to Gunawardena and MacIsaac (2004), the tutor is a trainer, animator, inducer, coordinator and facilitator. Consequently, the tutors’ role is important and valuable (Jones, 2007). In this respect, the tutors’ efficiency play a vital role in the satisfaction of the students and is associated with parameters such as:

- their scientific knowledge,
- their love and devotion to their work,
- their efforts to investigate the students’ needs,
- the students’ goals and their expectations from the course/module,
- the correct course/module design, i.e. their preparation and use of the right teaching techniques, and
- the positive attitude and encouragement (Ali, Ramay & Shahzad, 2011).

Finally, regarding educational evaluation, this refers to the systematic and organized procedure where processes, systems, people, means, or results of an educational mechanism are assessed according to predefined criteria and through predetermined means (Dimitropoulos, 1999).

According to Rowntree (1998), evaluation is the collection, analysis and interpretation of information for any aspect of an educational program in order to assess the effectiveness and efficiency of all parameters related to its application. In the present context, emphasis is put on how the students evaluate a distance education course they have enrolled into. Empirical research accessing the relationship between student satisfaction and specific parameters of distance education has mainly concentrated on on-line distance education courses (Ali, Ramay & Shahzad, 2011; Arbaugh, 2000; Kruger, 2000; Sher, 2009). The present study examines student satisfaction and its relationship with

- student-tutor interaction,
- the performance of the tutor, and
- the course evaluation, in a blended distance learning environment of the Hellenic Open University (HOU).

The HOU was officially established in 1997 and is the only University offering exclusively distance education courses in Greece.

RESEARCH QUESTIONS

Based on the above, the aim of this study is to determine the relationship between students’ satisfaction and

- the performance of the tutor,
- the student-tutor interaction and
- the students’ evaluation of the educational course in which they enrolled.

Furthermore, the paper investigates differences in

- students' perceived satisfaction,
- student-tutor interaction,
- performance of the tutor, and
- evaluation of the course by the students based on demographic factors - such as gender, age and previous experience in distance learning.
**METHODOLOGY**

**The Educational Framework**
The HOU currently offers six (6) undergraduate and twenty five (25) postgraduate courses, all addressed to adult learners. For each course module, HOU students should hand in 4-6 written assignments throughout the 10-month academic year and sit a compulsory exam at the end of it. Furthermore, each course module includes five face-to-face Counseling Group Sessions (CGS) which take place in 9 cities all over the country for undergraduate courses and in 3 cities for postgraduate courses. Participation in CGS is not compulsory. Tutor-student communication and interaction between CGS is mainly held through e-mail and telephone. Students at HOU are provided with printed course material and a set of books, audio and video material, CD-ROMs/software, all especially prepared for distance learning. There is also a web-based instructional environment / portal (http://online.eap.gr), where each course has its own website. Course websites simplify organizational procedures and provide fora for asynchronous interaction (http://www.eap.gr). The use of the portal is gradually increasing (Mavroidis, Karatrantou, Koutsouba, Giossos & Papadakis, 2013).

**Sample**
The sample was taken from four groups of the course module “Open and Distance Education” from the postgraduate program “Studies in Education” of the School of Humanities of the HOU. The students of the sample were attending the module during the academic year 2012-13. Two groups were holding their CGS in Athens and two in Thessaloniki. The questionnaires were distributed during the opening of the third CGS, in February 2013. In total, 81 completed questionnaires were collected. Thirty eight questionnaires were collected from Athens and forty three from Thessaloniki.

**Instrument**
The questionnaire used was based on the work of Ali, Ramay and Shahzad (2011) and of Arbaugh (2000) and consisted of thirty five closed-type questions, divided into six categories:

- demographic information,
- satisfaction from studies,
- tutor’s performance,
- communication and interaction between the tutor and the students, and e) course evaluation by the students.

More specifically, the satisfaction of the students from their studies was examined with six questions, the tutor’s performance with nine questions, the communication and interaction between the tutor and the students with seven questions and, finally, the evaluation of the course with seven questions. A five point Likert scale was used, with 5 options ranging from strongly disagree to strongly agree.

**Data Analysis**
The data collected were analyzed by descriptive (median and range) and inductive statistics. More specifically, (a) a Spearman rank-order correlation coefficient to assess the relationship between different parameters, (b) a Mann-Whitney test to examine differences related to gender and previous experience in distance learning, and (c) a Kruskal-Wallis test to examine differences related to age and to the number of course modules and CGS already attended by the students. The statistical package SPSS 17 was used to perform the statistical analysis and the level of significance for the statistical tests was set at 0.05.
RESULTS

Validity and Reliability

According to Babbie (2011: 224) when we refer to the term validity we mean the grade to which an empirical measure mirrors sufficiently the true meaning of the concept under consideration while the reliability is related to whether a particular technique applied repeatedly to the same object brings each time the same results (Babbie, 2011: 219). According to Green and Salkind (2007), the reliability coefficients should be bigger than .7 in order to be able to assume sufficient reliability for a research tool. Cronbach's alpha for the overall questionnaire (including twenty nine items) was .91. Furthermore, Cronbach's alpha for the student satisfaction was .86, for the performance of the instructors was .90, for the student-tutor interaction .88, and finally for the evaluation of the program by the student .86.

Demographic Profile

The sample consisted of 66.7% women and 33.3% men. The 45.7% of the HOU's students were from 31 to 40 years old. The 82.7% were graduates of higher educational institutions and 9.9% had a postgraduate degree. A percentage of 82.7% had no previous experience in open and distant education, 35.8% had attended three thematic units, and finally 32.1% has attended from 5 to 8 CGS.

Descriptive Statistics

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all f%</th>
<th>Little f%</th>
<th>Moderately f%</th>
<th>Enough f%</th>
<th>Much f%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am satisfied by my decision to follow the distance learning postgraduate program of the H.O.U.</td>
<td>0</td>
<td>1.2</td>
<td>19.8</td>
<td>50.6</td>
<td>28.4</td>
</tr>
<tr>
<td>I believe that the distance learning postgraduate program covered my needs in a very satisfactory level.</td>
<td>0</td>
<td>2.5</td>
<td>32.1</td>
<td>50.6</td>
<td>14.8</td>
</tr>
<tr>
<td>If I had again the chance to follow a distance education program, I would do it with pleasure.</td>
<td>1.2</td>
<td>9.9</td>
<td>19.8</td>
<td>38.3</td>
<td>30.9</td>
</tr>
<tr>
<td>I think that the quality of the distance education program I followed was better than that of a conventional one with the same subject.</td>
<td>2.5</td>
<td>14.8</td>
<td>24.7</td>
<td>46.9</td>
<td>11.1</td>
</tr>
<tr>
<td>I consider that the distance education program made my studies easier than a conventional one.</td>
<td>3.7</td>
<td>6.2</td>
<td>17.3</td>
<td>45.7</td>
<td>27.2</td>
</tr>
<tr>
<td>I would suggest the distant studies in the HOU to my friends/colleagues</td>
<td>0</td>
<td>6.2</td>
<td>13.6</td>
<td>38.3</td>
<td>42.0</td>
</tr>
</tbody>
</table>

The 81 students of the sample reported a Mdn of 3.83 in a scale of 1 to 5 for their satisfaction from studies (IQR=1.0), 4.11 for the tutor's performance (IQR =.94), 3.78 for the communication and interaction with their tutor (IQR =.71) and finally a Mdn of 3.71 for the course evaluation (IQR =.86).
Table: 2  
Tutor’s performance (nine questions)

<table>
<thead>
<tr>
<th></th>
<th>Not at all f%</th>
<th>Little f%</th>
<th>Moderately f%</th>
<th>Enough f%</th>
<th>Much f%</th>
</tr>
</thead>
<tbody>
<tr>
<td>How satisfactory was the performance/effectiveness of your instructors in the HOU in total?</td>
<td>0</td>
<td>1.2</td>
<td>24.7</td>
<td>56.8</td>
<td>17.3</td>
</tr>
<tr>
<td>Were your instructors available for communication (in the hours given, by phone, mail, etc)?</td>
<td>0</td>
<td>1.2</td>
<td>16.0</td>
<td>25.9</td>
<td>56.8</td>
</tr>
<tr>
<td>Did they activate/ help the students to learn?</td>
<td>1.2</td>
<td>3.7</td>
<td>22.2</td>
<td>51.9</td>
<td>21.0</td>
</tr>
<tr>
<td>Did they treat all students fairly?</td>
<td>0</td>
<td>1.2</td>
<td>18.5</td>
<td>48.1</td>
<td>32.1</td>
</tr>
<tr>
<td>Did they respect all students?</td>
<td>0</td>
<td>0</td>
<td>3.7</td>
<td>42.0</td>
<td>54.3</td>
</tr>
<tr>
<td>Did they accept and encourage questions and comments pleasantly?</td>
<td>0</td>
<td>1.2</td>
<td>17.3</td>
<td>43.2</td>
<td>38.3</td>
</tr>
<tr>
<td>Did they present the information in a clear manner?</td>
<td>1.2</td>
<td>0</td>
<td>32.1</td>
<td>51.9</td>
<td>14.8</td>
</tr>
<tr>
<td>Did they give emphasis in the important points and concepts?</td>
<td>1.2</td>
<td>2.5</td>
<td>21.0</td>
<td>54.3</td>
<td>21.0</td>
</tr>
<tr>
<td>Did they show that they knew their subject?</td>
<td>0</td>
<td>1.2</td>
<td>12.3</td>
<td>45.7</td>
<td>40.7</td>
</tr>
</tbody>
</table>

Table: 3  
Communication / interaction between the tutor and the students (seven questions)

<table>
<thead>
<tr>
<th></th>
<th>Not at all f%</th>
<th>Little f%</th>
<th>Moderately f%</th>
<th>Enough f%</th>
<th>Much f%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the instructors encourage me to participate actively in the discussions during my studies?</td>
<td>0</td>
<td>6.2</td>
<td>17.3</td>
<td>51.9</td>
<td>24.7</td>
</tr>
<tr>
<td>Did the instructors give me constructive feedback on my written essays through their comments?</td>
<td>3.7</td>
<td>3.7</td>
<td>23.5</td>
<td>44.4</td>
<td>24.7</td>
</tr>
<tr>
<td>Did I have the possibility to interact with the instructors during discussions (and generally)?</td>
<td>0</td>
<td>3.7</td>
<td>21.0</td>
<td>54.3</td>
<td>21.0</td>
</tr>
<tr>
<td>Did the instructors deal with me and help me individually?</td>
<td>3.7</td>
<td>6.2</td>
<td>32.1</td>
<td>43.2</td>
<td>14.8</td>
</tr>
<tr>
<td>Did the instructors inform me regularly for my progress and encourage me to continue my efforts?</td>
<td>4.9</td>
<td>9.9</td>
<td>30.9</td>
<td>44.4</td>
<td>9.9</td>
</tr>
<tr>
<td>Did the instructors promote and encourage the communication and collaboration between the students?</td>
<td>2.5</td>
<td>8.6</td>
<td>32.1</td>
<td>40.7</td>
<td>16.0</td>
</tr>
<tr>
<td>Did the instructors respond adequately to questions and give clarifications whenever needed?</td>
<td>0</td>
<td>3.7</td>
<td>16.0</td>
<td>59.3</td>
<td>21.0</td>
</tr>
</tbody>
</table>

Table: 4  
Evaluation of the educational course by the students (seven questions)
Correlation Between Factors
A series of Spearman rank-order correlations were conducted in order to determine if there were any relationships between the satisfaction of the students from their studies, and a) the performance of the tutors, b) the student-tutor communication and interaction, and c) the course evaluation by the students. A two-tailed test of significance indicated that there was a significant, positive correlation between the satisfaction of the students from their studies and a) the performance of the tutors ($r_s(81) = .622, p = .000$), b) the student-tutor communication and interaction ($r_s(81) = .502, p = .000$) and c) the course evaluation by the students ($r_s(81) = .628, p = .000$).

Differences
Male students’ satisfaction levels ($Mdn=3.83$) did not differ significantly from those of female students’ ($Mdn=3.92$), $U=657.50, z=-.719, ns, r=-.08$. Neither male students’ evaluation of their tutor’s performance ($Mdn=4.22$) differ significantly from those of female students’ ($Mdn=4.06$), $U=633.00, z=-.934, ns, r=-.10$. Also, male students’ evaluation of the communication and interaction with their tutor ($Mdn=3.71$) did not differ significantly from that of female students’ ($Mdn=3.79$), $U=690.00, z=-.392, ns, r=-.04$, and male students’ evaluation of their course ($Mdn=3.86$) did not differ significantly from that of female students’ ($Mdn=3.64$), $U=621.50, z=-1.081, ns, r=-.12$.

Satisfaction levels of students with experience in distance education ($Mdn=4.17$) did not differ significantly from those of non-experienced ones ($Mdn=3.83$), $U=321.50, z=-1.848, ns, r=-.21$. Neither the evaluation of the tutor’s performance differ significantly between students with experience in distance education ($Mdn=4.00$) and non-experienced ones ($Mdn=4.11$), $U=435.00, z=-.426, ns, r=-.05$. Also, students’ evaluation of the communication and interaction with their tutor did not differ significantly between students with experience in distance education ($Mdn=3.76$) and non-experienced ones ($Mdn=3.71$), $U=418.50, z=-.633, ns, r=-.07$, and the evaluation of their course did not differ significantly between students with experience in distance education ($Mdn=3.71$) and non-experienced ones ($Mdn=3.71$), $U=427.00, z=-.526, ns, r=-.06$.

There was a statistically significant difference among different age group students’ satisfaction levels ($H(3)=8.389, p=.034$), with a mean rank of 29.17 for students younger than thirty old, 45.01 for students between thirty one to forty years old, 32.90 for students between forty one to fifty years old and 52.08 for students older than fifty one years old. In the contrary, there was not a statistically significant difference between
different age group regarding students’ evaluation of their tutor’s performance \( (H_{(3)}=3.600, \text{n.s}) \), with a mean rank of 24.25 for students younger than thirty old, 43.45 for students between thirty one to forty years old, 40.31 for students between forty one to fifty years old and 43.33 for students elder than fifty one years old. Neither there was a statistically significant difference between different students’ age groups regarding the evaluation of communication and interaction with their tutor \( (H_{(3)}=1.533, \text{n.s}) \), with a mean rank of 29.67 for students younger than thirty old, 41.73 for students between thirty one to forty years old, 42.40 for students between forty one to fifty years old and 41.38 for students elder than fifty one years old. There is also no statistically significant difference between different students’ age groups regarding the evaluation of the course by students \( (H_{(3)}=2.923, \text{n.s}) \), with a mean rank of 38.58 for students younger than thirty old, 40.85 for students between thirty one to forty years old, 37.17 for students between forty one to fifty years old and 50.96 for students elder than fifty one years old.

The results from the Kruskal-Wallis test showed that there was not a statistically significant difference between the number of course modules that the students have attended in relation to student satisfaction \( (H_{(3)}=3.071, p=.381) \), in relation to student-tutor interaction \( (H_{(3)}=3.346, p=.341) \) and in relation to the evaluation of the course by the students \( (H(3)=3.844, p=.279) \). On the other hand, the results showed a statistically significant difference regarding the number of course modules attended in relation to the evaluation of the tutor’s performance \( (H_{(3)}=8.412, p=.038) \). The mean rank was equal to 54.97 for students that have attended one course module, 38.27 for those who have attended two course modules, 40.05 for those who have attended three course modules and 31.29 for students who have already attended four course modules.

The results from the Kruskal-Wallis test also showed that there was not a statistically significant difference between the number of CGS that the students have attended in relation to tutor’s performance \( (H_{(3)}=5.045, p=.173) \), in relation to student-tutor interaction \( (H_{(3)}=2.347, p=.506) \) as well as in relation to the evaluation of the course by the students \( (H_{(3)}=3.741, p=.302) \). On the other hand, the results showed a statistically significant difference regarding the number of CGS attended in relation to student satisfaction \( (H_{(3)}=8.241, p=.043) \). The mean rank was equal to 50.16 for students that have attended one to four CGS, 33.38 for those who have attended five to eight CGS, 47.28 for those who have attended nine to 12 CGS and 34.66 for students who have attended more than twelve CGS.

**DISCUSSION AND CONCLUSIONS**

The main purpose of this study was to examine the relation between the satisfaction of the students from a distance learning course in the School of Humanities of the HOU and

- the performance of the tutor,
- the communication and interaction between the students and tutor, and
- the evaluation of the course by the students.

The results showed a very good, statistically significant, positive correlation between student satisfaction and all three examined factors noted above. This comes to an agreement with the results of Ali, Ramay & Shahzad (2011) where the student-instructor interaction is positively and significantly correlated with students’ satisfaction along with the instructor’s performance and the course evaluation. According to Sher (2009), both student-student and student-instructor interactions are significant contributors to the level of student learning and satisfaction in a technology-mediated environment. Shehab (2007) conducted research in a blended learning environment and
her results suggested that the relationship between learners’ satisfaction with most perception dimensions, namely course structure, quality of instructional methods and interface was significant and moderately positive. It should be noted however that, although many studies suggest that interaction is the key element for students’ learning and satisfaction, Saman (2004) suggests that there is no significant correlation between the students’ perception of tutors and the students’ learning outcomes.

**Students’ Satisfaction from Their Studies**

According to the descriptive statistics of the present research, the majority of the students were satisfied by their decision to follow the HOU’s distant postgraduate program declaring that the postgraduate program covered enough their needs. As the results of other studies also suggest (Iliadou & Anastasiadis, 2010) HOU students – at least postgraduate ones - are in general satisfied by their educational experience. Also, the students responded that if there were given again the chance, they would follow with pleasure a distance education program. As far as the quality of the distant program is concerned, they declared that it was quite better in relation to a conventional program. What is more, the majority of students stated that following a distance education program made their studies easier than in a conventional program. Finally, a large percentage of the questioned participants would suggest the program to friends and colleagues. These responses highlight the positive feeling that alternative educational methods such as distance education create to participants, especially since they overcome the barriers posed by conventional educational programmes. Furthermore, this may be directly related to the nature of blended learning that depends on distance learning methods without the complete loss of face-to-face sessions (Colis & Moonen, 2001; Shehab, 2007). The role of the tutor and the interaction between students and tutors are very important in this respect (Keegan, 1986; Moore & Kearsley, 2005). Finally, the number of face-to-face meetings is limited in the blended learning environment of the HOU and this helps the employed learners, who are a majority in the case of the postgraduate course, to manage between work and studies, along with having other life responsibilities. This may be another reason for the satisfaction they expressed, inline with the results of Wagner Werner and Schramm (2002) and Shehab (2007).

Concerning the differences between male and female students, male students’ satisfaction level did not differ significantly from female students’. This is in agreement with the study of Shehab (2007), where the gender was found to be an insignificant factor in the learners’ overall perception. On the contrary, there was a statistically significant difference among different age group students’ satisfaction levels. This is in agreement with the results of Huang (2002) who found that age is correlated significantly with the perception dimensions in a distance learning environment. On the other hand, the results of Shehab (2007) suggested that age was an insignificant factor in the learners’ overall perception of their studies. It appears that the results may depend on the course setting and the specific parameters of the research (for example about 15% of respondents in the study of Shehab (2007) were below 20 years old, while all students in the present study are above 23 years old and 93% above 30 years old).

**Tutor’s Performance**

As far as the tutor’s performance is concerned, the majority of students consider that it was very effective; a large number of students declared that tutors were readily available for communication and stated that they were helping the students by phone or mail. This is in agreement with the studies of Iliadou and Anastasiadis (2010), indicating that tutors in the postgraduate courses of the School of Humanities of the HOU respond adequately to the special, demanding, role of a distance education tutor (Gunawardena & MacIsaac, 2004; Jones, 2007). Since similar results were found by Zigouris and Mavroidis (2011) in
a different, more informal, educational setting in Greece it appears that the distance education culture, initiated by HOU in 1998, is spreading in the different educational settings in Greece.

The respondents also stated that the instructors were facing students in a fair manner, noting that they showed respect to students. Thereafter, the majority of the questioned students declared that the instructors were happily accepting questions and comments and presented the information with clarity. A large percentage of students mentioned that tutors provided adequate emphasis to the important points and concepts and knew well the subject they taught. These results are in agreement with the study of Mahmood, Mahmood and Malik (2012) and are significant for the effectiveness of distance education, as the teacher’s role is very important in a distance learning environment. Students seek from their teachers to respond in a timely manner and this action influences positively student’s satisfaction.

Communication and Interaction between Students and Tutor
As far as the communication and interaction between the tutor and the students is concerned, the majority of the students answered that the tutors were encouraging them to actively participate in the discussions. They also considered that the instructors were providing adequate feedback to the essays. A large percentage of the respondents stated that there was enough interaction with the tutors, declaring that the teachers helped them individually in a quite satisfactory level. They mentioned that the teachers were informing them quite regularly for their progress and encouraging them for continuation of their effort. Also, in agreement with the study of Iliadou and Anastasiadis (2010), students confirmed that the tutors were promoting and encouraging communication and collaboration between students. Finally, a large percentage mentioned that they were solving students’ queries and that they were providing to students clarifications where needed. As stressed by Zigouris and Mavroidis (2011), it appears that both students and tutors believe in the importance of communication, covering the needs of students with respect to both instructional and emotional support.

It should be noted that the most important form of communication developed was the interpersonal one during meetings, followed by communication through e-mail and telephone. Face-to-face communication is considered to be an important means of communication, highlighting the fact that students consider it essential in the framework of a distance learning course (Anastasiades & Iliadou, 2010; Angelaki and Mavroidis, 2013; Wilson and Whitelock, 1998). Conrad (2005) in her study on the development of learners’ sense of community in a blended course also concludes that face-to-face interaction was considered as a benchmark of communication for the group of learners.

Course Evaluation
As far as the course evaluation is concerned, the majority of respondents declared that they have perceived adequately valuable learning experiences in their studies in the HOU so far. The students answered that the written essays were quite relevant to the subject of their studies and useful, and that the teaching material was quite useful and suitable. As far as the course requirements are concerned, they replied that these were clarified moderately in the material or/and orally. The majority declared that the evaluation process and the final exams were quite fair. In the question if the workload was suitable in relation to the level and the schedule/timetable of their studies, the majority answered “enough”. It appears that students would like the course programme structure to be better formulated and more clearly communicated. This appears to be a common issue in distance education, as - for example - Shehab (2007) notes that course structure was still not up to the expectations of learners since their perception of this dimension was the
lowest compared to other perception dimensions. Finally, in the question if the knowledge they acquired in the specific program will be of use - both professionally and personally - a large percentage declared “enough”.

Overall Discussion
The results of the present study, in agreement with other relevant studies in the literature, suggest that the role of the tutor is crucial for the students’ satisfaction of their studies. The promotion of a good climate of cooperation on behalf of the teacher, either in relation to an educational platform or a face-to-face session in the classroom, contributes to the learning process and consequently to the achievement of the learning targets. Also, the timely response of the tutor in questions and requests for clarifications, for instance in relation to written essays as well as suggestions for suitable bibliography, contributes to the good communication and consequently to the students’ satisfaction from their course (Mahmood, Mahmood & Malik, 2012; Sarakatsanou, 2007).

Student satisfaction is one of the five pillars of quality in combination with the satisfaction by the distance education institute, the effective learning, the access and the institutional relationship of cost and effectiveness (Moore, 2002; Vernadakis, Gianousi, Tsitskari, Antoniou & Kloumourtzoglou, 2012). According to Ntarantoumis, Simos, Carcanis and Lampsa (2008), the satisfaction of the learner is one of the most important axes and can be divided into specific indicators or sub-axes for its better and more detailed examination:

- pleasure,
- recompense, and
- benefits acquired by the student from his/her studies.

These indicators can provide a good overview of the general satisfaction of the student. In an effort to match the tutor’s behavior and the student’s satisfaction in a traditional class, Arbaugh (2000) correlated the direct behavior of the teachers with the students’ satisfaction in an online environment.

Arbaugh (2000) concluded that the immediacy of the instructor along with the feedback, the use of humor or emotions, to address student by its name to the written communication, to discuss and share personal examples, are the best prognostic factors for the student satisfaction rather than his mastery in the technological means (Arbaugh, 2000; Jackson, Jones & Rodriguez, n.d.).

Even in online distance education, the biggest challenge is not technology, but the definition and the application of suitable strategies and techniques, offering effective learning opportunities (Jackson, Jones, & Rodriguez, n.d.).

Proposals for further research
It would be useful to conduct a comparative study between distance learning students and students attending conventional face-to-face courses, in order to cross-examine the parameters investigated here.

Also, it would be useful to examine a larger sample of students, from different disciplines, following both undergraduate and postgraduate courses.

Finally, further research could focus:
on examining the views of the tutors in relation to the perceived communication/interaction developed between tutors and students and the tutor’s satisfaction from their work, and

the relation between student satisfaction from the course and student-student interaction.

On the latter, it should be noted that Jung et al. (2002) suggested that learners’ satisfaction with online learning environments was strongly related to the amount of active interaction with other learners.

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REFERENCES


FACTORS MOTIVATING PRESERVICE TEACHERS FOR ONLINE LEARNING WITHIN THE CONTEXT OF ARCS MOTIVATION MODEL

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ABSTRACT

The purpose of this study was to determine the factors motivating pre-service teachers for online learning within the context of ARCS motivation model. The study, in which the phenomenology model was used, was carried out with 52 pre-service teachers attending the department of Computer Education and Instructional Technologies at the Education Faculty of Çanakkale Onsekiz Mart University in Turkey.

The participants were experienced in online learning. In the study, the data were collected with an open-ended questionnaire within the framework of the ARCS motivation model. The research data were analyzed with descriptive analysis and examined fewer than four themes (attention, relevance, confidence and satisfaction).

Also, for each theme, sub-themes were obtained. The most frequent factor motivating for online learning was “relevance to individual differences” found under the theme of “confidence”. As for the least frequent motivating one, it was “flexibility” found under the theme of “relevance”.

Keywords: Online learning, motivation in online learning, ARCS model.

INTRODUCTION

Today, it is a well-known fact that with the development of technology, web-based tools (social networks, wikis, blogs and so on) are integrated into education and are thus commonly used in online learning (Mcgreal & Elliott, 2008). Online learning is referred to as environments (like the Internet or the Intranet) using network technology to deliver, support and assess the formal or informal instructional content (Shank & Sitze, 2004). When the use of online learning environments is taken into consideration, a course can be taught in three ways:

Entirely online: The course is taught completely online. For instance, the lessons can be taught entirely online via Moodle, which is a learning management system.

A blend of online and face-to-face: The course is taught with the blend of online and face-to-face methods of instruction. The lessons can be taught partly on online basis and partly on face-to-face basis. For example, for the first seven weeks, the course can be taught using the face-to-face method, and for the following seven weeks, Moodle can be used for online teaching.
Online support to face-to-face: Face-to-face teaching can be supported with an online environment. For instance, such web-based tools as blogs, Twitter, Edmodo and Facebook can be used to support face-to-face teaching. Lessons are taught completely on face-to-face basis, and the web-based tools are used for such purposes as collecting the homework, holding discussions and sharing materials.

Online learning has brought about several issues besides certain renovations in education. One of the main issues regarding online learning is the learner motivation (Bonk, 2002). Learner motivation is the extent to which the learner makes effort in and pays attention to various activities. Learners are likely to get motivated to learn via an activity even if they do not find the content interesting. Motivation to learn is to adopt learning goals and related strategies (Brophy, 2010).

Motivation is likely to have influence on students’ performance (Gabriele, 2003). Motivation to learn is an important factor for students to become successful in online learning (Keller, 1999). When motivation to learn is low, the potential to learn may decrease (Hodges, 2004; Wlodkowski, 1985; Yukselturk & Bulut, 2007). In online learning environments, doing designs by determining students’ motivational requirements can increase their motivation and performance (Keller & Suzuki, 2004). Here, use of motivation models could be said to be useful. One of the commonly used motivation models is Keller’s ARCS motivation model (1987a).

**ARCS MOTIVATION MODEL AND MOTIVATION IN ONLINE LEARNING**

John Keller states that it is necessary to consider the dimensions of attention, relevance, confidence and satisfaction (ARCS) in the phase of designing learning environments while maintaining motivation in learning processes. In ARCS model, the dimension of attention allows drawing and maintaining the attention with the help of different instructional design strategies or applications. Attention-drawing strategies include not only providing interesting graphics or animations that put learners into contradiction regarding their past experiences but also diversifying the medium of instruction (films, videos and so on). In the dimension of relevance, the reason why students should study for their lessons should be clarified. Determining learners’ interests and associating their interests with instruction are among relevance strategies. In the dimension of confidence, students should be encouraged to attend courses regularly and to become successful in courses. Clear statement of learning goals and the organization of learning materials from simple to complex are among confidence strategies. As for the dimension of satisfaction, students feel themselves better when they achieve a task. Giving awards and reinforcers is among satisfaction strategies (Keller, 1987a; Keller & Suzuki, 2004).

It could be stated that the ARCS model was developed to examine motivation primarily in face-to-face learning environments. Parallel to the changing technologies and learning environments, motivation has become an issue of concern in online learning environments. Keller (1997) reported that online environments could themselves manage to draw the attention of learners due to the novelty of online environments although instructional designers design learning environments without considering the factors motivating online learners in the period of newly-spread online environments. However, it is pointed out that this interest decreases in time as students become familiar with the environment (Clark, 2001; Keller & Suzuki, 2004). Also, the drop-out rate for online courses is fairly high (Bonk, 2002; Levy, 2007). It is reported that student satisfaction is the basic indicator of attending online courses (Levy, 2007). Students’ discontent with online learning decreases their motivation and thus do not attend the courses (Chyung, 2001; Sun, Tsai, Finger, Chen & Yeh, 2008).
Therefore, during online courses, students’ motivation should be maintained at high levels with the help of instructional activities (Yukseturk & Bulut, 2007). However, an important question here is “How should learning activities be designed to increase learner motivation?” Determining the factors that motivate learners for online learning could contribute to the selection of instructional activities.

When the related literature is examined, it is seen that there is limited research on how to increase learner motivation in technology-aided instructional environments (Gabrielle, 2003). In addition, it is stated that motivation principles are rarely taken into consideration in the design of online learning environments (Bonk, 2002). For this reason, it is pointed out that it is important to investigate online learner motivation (Bonk, 2002; Chen & Jang, 2010) and that there is a need for further research evaluating learner motivation in online learning environments (Smith, 2008). Determining the factors that motivate learners in the process of online learning could be said to provide instructional designers with important implications.

When the factors that motivate learners in technology-aided instructional environments are identified, learners’ motivation and performances could be increased with appropriate strategies (Gabrielle, 2003). In order to maintain learner motivation in the design of technology-aided instructional environments, the ARCS model can be used (Song & Keller, 2001). Similarly, it is pointed out that the ARCS model can be considered for the design of online learning environments (Chyung, 2001; Keller & Suzuki, 2004; Miltiadou & Savenye, 2003; Smith, 2008). However, the dimensions found in the ARCS motivation model do not explain which motivational tactics, or when, will be used for students. For this reason, it is necessary to develop the motivational tactics that meet students’ characteristics and needs (Keller, 1987b). Determining the motivating factors for online learners could be said to contribute positively to the design of an environment as well as to the learner’s performance.

In literature, there are a number of studies conducted to investigate the motivating factors for online learning. Sun, Tsai, Finger, Chen and Yeh (2008) examined the important factors influential on learners’ satisfaction in e-learning. In their study carried out with e-learners, they determined the important factors influential on learners’ satisfaction in e-learning as computer anxiety, the trainer’s attitudes towards e-learning, course flexibility, course quality, perceived usefulness, perceived ease of use and diversity in assessments. Sawang, Newton & Jamieson (2013), in their study conducted with employees taking online training in an institution, found out that satisfaction with e-learning had a significant relationship with authentic activities provided, with the institution’s support to e-learning and with learners’ openness to changes. In another study carried out by McLaren (2010), the researcher aimed at determining the influence of instructor-learner interaction on learner’s satisfaction in online M.A. courses. The results of the study revealed that instructor feedback, instructional immediacy, instructor availability and transactional distance all had influence on online learners’ satisfaction. Law, Lee and Yu (2010) determined the motivational factors for university students taking the course of computer programming with e-learning support. The results of their study revealed that “individual attitudes and expectations”, “clear instructions” and “reward and recognition” were important motivators.

Apart from these studies determining the learners’ views about the factors that motivate for online learning, there are other studies carried out to determine the views of the teaching staff giving online education. Bonk (2002) examined the motivational characteristics of web-based learning taking the views of those giving online education (corporate trainers, instructional designers, training managers and so on). In the study, relevant and meaningful materials, timely and responsive feedback, goal-driven and
product-oriented activities and personal growth were found highly important for web-based learning.

When research on motivation in online learning was examined, it was seen that various factors were influential on motivation and on satisfaction, which is a sub-dimension of motivation according to the ARCS model. In addition, it is obvious that these studies were generally carried out in a certain setting and designed with the quantitative approach. It could be stated that qualitative studies should be designed to collect in-depth data in different settings. In this respect, the purpose of the present study was to determine the motivating factors in online learning for preservice teachers within the scope of the ARCS motivation model.

**METHOD**

**Research Model**

The study was designed as phenomenology to help understand the motivating factors for students in online learning environments within the framework of the participants’ experiences. Phenomenology can be regarded as a way of personal perception of a phenomenon or experience. In other words, events are presented from the perspective of the participants (Mertens, 2009). In phenomenology studies, the basic question is “What are the experiences regarding the situation from the perspectives of the participants determined?” (Patton, 2002).

**Study Group**

The study was conducted in an Education Faculty of a state university in Turkey with the participation of a total of 59 students (24 female, and 35 male) from the Department of Computer Education and Instructional Technologies (CEIT). Of all the participants, seven of them were junior students, and 52 of them were senior students. The participants were determined with the purposeful sampling method. In this respect, for the purpose of explaining the research phenomenon more clearly, the process followed to determine the participants regarding the related subject, which could be called “information rich” (Patton, 1990), was as follows:

- The research subject required the participation of students who had theoretical and practical knowledge about online learning. For this reason, the study was carried out with CEIT students taking theoretical and practical courses regarding online learning at Education Faculty. It is a fact that CEIT students have experience in online learning within the scope of several courses.

- When the curriculum of CEIT department is examined, it is seen that courses related to online learning are often taught to junior and senior students.

Therefore, as junior and senior students are more likely to be knowledgeable about online learning, the study was carried out only with junior and senior students.

**Data Collection Tool**

The data collection tool used in the study was an online questionnaire form made up of four open-ended questions and developed by the researchers within the framework of the ARCS model. The measurement tool included one question for each of the dimensions of the ARCS model. The open-ended questionnaire form developed was examined by a CEIT faculty member for its face validity and content validity. In addition, the questionnaire
form was piloted with a junior student attending the department of CEIT. The views determined helped decide to inform the research participants about the dimensions of the ARCS model. In this respect, before the application of the questionnaire, the dimensions of the ARCS model were explained to the participants, and they were asked to respond to the questions according to each dimension. The questions included in the questionnaire form were as follows:

What are the motivating factors in online learning for you? Please provide answers within the framework of the dimensions below:

- Explain the factors in detail that draw your attention.
- Explain the factors in detail that meet your learning needs.
- Explain the factors in detail that make you feel relaxed and confident.
- Explain the factors in detail that make you satisfied.

The first question found in the questionnaire aimed at determining the participants’ views about the dimension of “attention” of the ARCS model; the second question about the dimension of “relevance”; the third question about the dimension of “confidence”; and the fourth question about the dimension of “satisfaction”.

Data Collection and Analysis
The research data were collected with an online open-ended questionnaire form. Of all the 155 junior and senior students, 66 of them volunteered to participate in the study. Following the collection of the research data, the responses of 59 students were analyzed with the descriptive analysis method within the framework of the ARCS model found in related literature. In the descriptive analysis phase, the data were examined according to the themes determined based on the related literature (attention, relevance, confidence and satisfaction).

Validity and Reliability
In qualitative studies, validity means that the researcher objectively observes a phenomenon as it is (Yıldırım and Şimşek, 2008). Thus, in order to collect objective data with the data collection tool, an impartial expert was asked to examine the data collection tool developed based on a model. In addition, for the validity of the data collection tool, it was piloted before the application. Following the data collection process, descriptive analysis was conducted within the theoretical framework (ARCS model) found in related literature. For the sub-themes, the reliability coefficients were calculated. While determining the sub-themes regarding the themes, both researchers examined the data independently of one another.

Depending on the formula suggested by Miles and Huberman (1994), the reliability of the study was calculated as 86% for the sub-themes of the first theme; 92% for those of the second theme; 82% for those of the third theme; and 89% for the sub-themes of the fourth theme.

In addition, code numbers were assigned to the participants in the study, and the research findings obtained were supported with direct quotations.

FINDINGS
As can be seen in Figure 1, the factors motivating the preservice teachers of information technologies were grouped under four themes within the context of the ARCS motivation model in line with the research purpose.
As can be seen in Figure: 1, the data were examined under four main themes. For each theme, related sub-themes were determined. Table 1 presents the frequencies regarding the themes.

<table>
<thead>
<tr>
<th>Theme heading</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention</td>
<td>40</td>
</tr>
<tr>
<td>Flexibility</td>
<td>19</td>
</tr>
<tr>
<td>Multiple Channel</td>
<td>9</td>
</tr>
<tr>
<td>Source Variety</td>
<td>6</td>
</tr>
<tr>
<td>Interaction</td>
<td>6</td>
</tr>
<tr>
<td>Relevance</td>
<td>16</td>
</tr>
<tr>
<td>Relevance to individual differences</td>
<td>9</td>
</tr>
<tr>
<td>Instant feedback</td>
<td>4</td>
</tr>
<tr>
<td>Flexibility</td>
<td>3</td>
</tr>
<tr>
<td>Confidence</td>
<td>55</td>
</tr>
<tr>
<td>Relevance to individual differences</td>
<td>31</td>
</tr>
<tr>
<td>Progress under expert control</td>
<td>12</td>
</tr>
<tr>
<td>Safety</td>
<td>6</td>
</tr>
<tr>
<td>Alternative to the pressure of the environment</td>
<td>6</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>12</td>
</tr>
<tr>
<td>Instant feedback</td>
<td>8</td>
</tr>
<tr>
<td>Time-Saving</td>
<td>4</td>
</tr>
</tbody>
</table>
Theme of Attention

The theme of attention was made up of four sub-themes. One of the pre-service teachers who pointed out that online learning drew their attention as it provided “flexibility” said

“flexible learning occurs as there is no limitation of time or place, and this makes learning more attractive” (teacher candidate-number 4).

In addition, some of the pre-service teachers stated that the presentation of the instructional content in a way to address “multiple channels” in the online environment drew their attention. Regarding this, one of the students said

“as an attention-drawing factor, the multimedia-learning environment addresses both the ear and the eye” (pre-service teacher-number 24).

Another pre-service teacher who stated that online learning provided “source variety” said;

“you can reach the necessary information more rapidly via a number of sources, and students can also reach the assistant instructor very easily in the online environment” (pre-service teacher-number 17).

Lastly, another pre-service teacher who stated that the “interactive” structure of online learning was attention-drawing said;

“communicating with friends, doing something with them, interacting with the teacher and doing all these things are quite attention-drawing” (pre-service teacher-number 57).

Theme of Relevance

One of the pre-service teachers who stated that online learning allowed “relevance to individual differences” said “I can study a course-related subject whenever I want. It is me who will define the time. To me, this is quite suitable for me. Also, some other students can study on their own styles...” (pre-service teacher-number 5).

Another pre-service teacher who reported that their motivation increased as online learning allowed “instant feedback” said “Since it allows opportunities for instant feedback, it helps determine learning deficiencies and communicate with a classmate easily” (pre-service teacher-number 25). Lastly, one other pre-service teacher who believed online learning provided “flexibility” and helped them get motivated said "Online course materials allow me to learn the subjects later that I haven’t understood during the class hour ... this flexibility motivates me ...” (pre-service teacher-number 25).

Theme of Confidence

This theme was made up of four sub-themes. One of the students who got motivated as online learning allowed “relevance to individual differences” said “...I study in my own environment, and nobody has to see each other... I determine my study environment on my own. It is relaxing for me to be home.... Other people can also direct the process as they want” (preservice teacher-number 32).

Another teacher who stated that s/he got motivated since online learning allowed “progress under expert control” said “I can communicate with the teacher not only during the course hour but also at any other time I want”. In addition, establishing communication in the process makes me feel that the process is under control; thus I feel confident” (preservice teacher-number 21). One other preservice teacher who stated that
s/he got motivated as online learning was sufficient in terms of “safety” said “There is a high level of safety. I feel confident and relaxed as it is only the course teacher who can see what I have done” (preservice teacher-number 6). Lastly,

Another preservice teacher who stated that s/he got motivated as online learning provided an “alternative to social pressure” said “While studying my lessons or sitting for an exam, nobody watches you, and you can ask questions...” (preservice teacher-number 45).

**Theme of Satisfaction**

The theme of satisfaction included two sub-themes. One of the preservice teachers who stated that “instant feedback” provided by online learning increased his or her motivation regarding the dimension of satisfaction said “Regardless of time and place, we can communicate with others if we have access to the Internet, and this is quite a fast way of communication” (preservice teacher-number 37). Another preservice teacher who stated that s/he got motivated as online learning allowed “saving time” said “It allows faster communication independently of time; you can easily find whatever you want; and you can store all your homework. These are all time-saving factors...” (preservice teacher-number 58).

When the sub-themes regarding the research data were examined, it was seen that different themes included the same sub-themes. In other words, the students stated that similar situations motivated them in different aspects within the scope of the ARCS model (Figure: 2).

![Figure: 2](image)

**Common Sub-Themes**

As can be seen in Figure 2, the flexible structure of the online learning environment motivated the students in terms of the two sub-dimensions of attention and relevance. The relevance of the online learning environment to individual differences motivated the students with respect to the dimensions of relevance and confidence. Instant feedback provided for the students in the online learning environment motivated them in terms of the dimensions of relevance and satisfaction.
DISCUSSION AND CONCLUSION

In the study, the factors motivating the online learners within the context of the ARCS model were determined. Regarding the dimension of “attention” of the ARCS model, it was found out that the students’ motivation increased due to flexibility, multiple channel, source variety and interaction. In the study, it was also revealed that the presentation of content in the online environment in a way to address multiple channels drew the students’ attention. Similarly, Mayer (2009) reported that the presentation of content for two channels (eye and ear) helped students learn better when compared to its presentation for a single channel. In addition, it is obvious that contents addressing more than one sense organ make learning more permanent. The finding obtained in the study that source variety increased the students’ motivation is consistent with the finding of another study (Bonk, 2002) that variety in delivery format was a factor increasing motivation. In addition, it was found out in the study that interaction in online environment increased the students’ motivation. This finding is also supported by Bonk (2002) who reported interaction to be an important factor that increased motivation at a moderate level. Similarly, McLaren (2010) found out that interaction in online learning increased learners’ level of satisfaction.

Regarding the dimension of “confidence” of the ARCS model, lack of social pressure, it was found out that the students’ motivation increased confidence, progress under expert control and relevance to individual differences. In the study, the fact that learners can ask an expert for help in an online environment whenever they want and that they can progress under the control of that expert was found to make the participants feel themselves relaxed. This finding obtained in the study is parallel to that of another study carried out by McLaren (2010) who reported that an instructor’s availability had positive influence on online learners’ satisfaction. Moreover, consistent with the finding of the present study that the online environment was safe, Bonk (2002) pointed out that learners’ levels of motivation increase when an online learning environment has a “safe climate”. Some of the participants reported that they were timid when compared to others in terms of their personal characteristics; that this situation could be considered within the scope of individual differences; and that they felt themselves in more comfort in the online learning environment as they did not see the other participants. In this respect, the sub-theme of relevance to individual differences and the sub-theme of lack of social pressure could be said to be two complementary sub-themes.

In the study, it was found out that regarding the dimension of “satisfaction” of the ARCS model, instant feedback and saving time increased the students’ motivation. As for the dimension of “relevance”, an important motivator in online learning environments (Hodges, 2004), relevance to individual differences, instant feedback and flexibility were found to increase motivation.

When the research findings obtained were examined, it was seen that some of the sub-themes occurred in more than one dimension. Flexibility, relevance to individual differences and instant feedback were determined as the common sub-themes. All these common sub-themes were attached to the theme of relevance. In other words, it can be said that other themes ("attention", "confidence" and "satisfaction") supported "relevance" theme. In this context, if motivation in the dimensions of "attention", "confidence" and "satisfaction" provided, motivation in the dimension of "relevance" can be also provided. To understand this relationship, more researches are needed.

Parallel to the finding obtained in the present study that flexibility was one of the factors motivating the students for online learning, Sun, Tsai, Finger, Chen and Yeh (2008) reported that e-learning course flexibility was among the most important factors
influential on learner satisfaction in e-learning. Similarly, in another study, Bonk (2002) found out that according to those giving online education, flexibility provided in an online learning environment had a moderate level of importance. When an online learning environment is designed in relevance to individual differences, learners’ levels of motivation increase as they can study according to their own learning style (Keller & Suzuki, 2004).

Similar to the sub-theme of relevance to individual differences found in the present study, Law, Lee and Yu (2010) reported that individual attitudes and expectations were among important motivators. Consistent with the finding obtained in the study that instant feedback in online learning increased the participants’ levels of motivation, Hodges (2004) found out that feedback and navigation systems were among the factors motivating for online learning. Bonk (2002) and Mclaren (2010) reported that instant feedback provided in an online learning environment was quite important for motivation.

The results of the study demonstrated that the dimension of “confidence” was the one with the highest frequency (f=55) influential on motivation in the online learning environment and that “satisfaction” was the one with the lowest frequency (f=12). Besides this, the sub-theme of “relevance to individual differences” found under the category of “confidence” was the one most frequently mentioned by the participants (f=31). In addition, “flexibility” found under the theme of “relevance” was the sub-theme with the lowest frequency (f=3).

Depending on the results obtained in the present study, it could be stated that students’ performance will increase if motivators for online learning determined regarding the dimensions of attention, relevance, confidence and satisfaction are taken into consideration while designing online learning environments.

The results of the present study are also thought to provide important implications for trainers, instructional designers and administrators dealing with online education and with its design. However, the present study has certain limitations. This study was carried out with the students attending the Department of Computer Education and Instructional Technologies at the Education Faculty of a state university. A similar study could be designed involving students from other departments. In addition, another similar study could be conducted in other public or private institutions giving online education. The present study was carried out with online learners from a certain age group. Future studies on online learner motivation could be carried out with participants from different age groups.

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OPEN AND DISTANCE LEARNING TOWARDS THE ERADICATION OF ILLITERACY OF THE TEA-GARDEN WORKERS IN BANGLADESH: Problems and Prospects

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ABSTRACT

Development of a society means the accumulation of improvement of all units of the society whatever it is small or large and important or less important. Needless to say that education goes identical with development. We have a large number of marginal people in different sector and region. Tea garden workers are one of them who are working silently for the improvement of the nation but they are not getting any educational degree in spite of their noble intention. Most of them are illiterate. Even they cannot make simple calculation of their household. Moreover, tea garden worker are low paid. About 56 percent labor work six days and 23 percent in seven days in a week but most of them are paid monthly less than 2500 taka for each. Yet they (63 percent) want to study again though they face financial problem (77 percent) and rest of them say about communication problem, unavailability of schools, adjustment problem with the schedule of the school, unwillingness of the authority and limited scope for the aged and dropped. Few of them claim against the management authority who often reluctant to give any chance for their betterment. It is impossible for them to avail conventional education. Resultantly it seems that only education through open and distance learning will be effective for them. In this study, it will endeavor to explore strategic issues and prospects of Open and Distance Learning (ODL) provided by Bangladesh Open University for the tea garden worker in the different regions of Bangladesh.

Keywords: Open and distance learning, tea-garden worker, illiteracy.

INTRODUCTION

Different kinds of study concerning tea garden workers of Bangladesh reveals that tea worker lead the most miserable life remaining unattended. As a marginal group of people tea garden workers need to educate urgently.

By getting education, they can change their lot. They also cannot taste the life beyond tea gardening. Working in tea garden has become their hierarchical profession. Bangladesh Tea
Board various local, national and international NGOs have explored the tea garden area to find out socio-economic condition of tea-worker to take necessary initiatives for their development. Ministry of Labor and Employment has noticed few of them and tried to ensure tea worker’s rights and opportunities. But the situation is yet not changing. Education, an important ladder for transformation of a community or society can easily improve the life of any section of people. According to the Bangladesh Tea Board report 2004, in 156 tea gardens (excluding those in Panchagarh) there were 188 primary schools with 366 teachers and 25,966 students. Bangladesh Tea Board works as the primary body about monitoring and improving their rights and opportunities. Partha Sankar Saha (2009) works on the issue of tea workers, claims that it contains very few information about the tea workers socio-economic condition especially there is no detail information about their educational condition. There is no data like number of eligible school goers, number of drop out, number of teacher and their salary etc. It revealed that the employers provide education in few gardens due to lack of the number of government schools. In the recent times, the NGOs have been operating significant number of primary schools. By this way tea garden worker become deprived of all kinds of basic rights.

These deprived tea garden workers are involving with different crimes of the society and they are being burden of the country. Deprived, exploited and alienated, the majority of the tea workers live an inhuman life. Bangladesh belongs to developing country. About 40% people live below the poverty line whose per capita income is less than 1000 dollar. Besides this, scarcity of resources has exacerbated the entire situation. As a result government can not take necessary initiatives to focus the light of education for all citizens every time, everywhere. Government looks forward to spread education in all section of people by engaging every possibility. Bangladesh Open University plays vital role by imparting formal, non-formal, technical and professional education.

Now a days Open and Distance Learning is applying fruitfully all over the world in spreading education among the deprived, dropped, disadvantage and professional group. Bangladesh Open University is the only public institution in Bangladesh which is imparting education through Open and Distance Learning for all class of people. Bangladesh Open University has been serving the nation with this motto through its six schools and a network of 12 regional resource Centres, 80 coordinating offices and more than 1,341 tutorial centres and more than 21,000 tutor nationwide (Bangladesh Open University Porikrama:2013). So it's one kind of responsibility of this university to reach education to the door step of this tea garden worker in everywhere of Bangladesh. Considering the above facts, with a view to importing need based education, the objectives of the present study was considered-

- To scratch out the socio-economic status of tea-garden worker
- To identify the strategic issues of educating them through Open and Distance Learning
- METHODOLOGY

The study has conducted through quantitative and qualitative approach. In our study, we have collected data from interviews, observations and reviewed different types of documents and websites related to this study.
The objectives were set in a manner that enables to open up avenues for further research in the field investigated, rather than draw any definitive inferences.

At present about 5 lacs of people are engaged in the 163 tea garden in different districts in Northern and South-eastern part of Bangladesh. Few ancient tea gardens from Sylhet district and new tea gardens from Panchagar district have been selected for this study.

There are as many as 20 tea gardens existing in Sylhet Sadar Upazila and and 7 large gardens in Panchagar. Out of 27 tea gardens, six were selected by random sampling method considering the size and location of each garden. The selected tea garden are Tarapur, Lackaturah, Alibahar tea estate of Sylhet Sadar Upazila and Moli tea garden, Salinan tea estate, Korotoa tea garden of Panchagar Sadar Upazila.

It maintains the involvement of the tea garden personnel, leader of tea garden, local representatives and facility provider in the tea garden and researcher on tea garden. Age, marital status, income, educational status, surroundings of their working and living place have been considered close to identify the challenges rendering open and distance learning for them.

**DEFINING OPEN AND DISTANCE LEARNING (ODL)**

The term open and distance learning and its definition are relatively new in the field of education, having gained prominence only in the past 15 to 20 years. Among the more commonly used terms related to open and distance learning are the following: correspondence education, home study, independent study, external studies, continuing education, distance teaching, self-instruction, adult education, technology-based or mediated education, learner-centred education, open learning, open access, flexible learning and distributed learning. Open and distance learning system can usually be described as made up of a range of components; mission or goal of particular system, programs and curricula, teaching/learning strategies and techniques, learning materials and resources, communication and interactions, support and delivery system, students, tutors, staff and other experts, management, housing and equipment, and evaluation. (UNESCO, 2002)

In short, ODL is the system of education where learners learn by themselves in any age, any time and in any where or absence of classrooms. Teachers are separated from the students – students do not get any personal touch of the teacher. A wide variety of media are used to serve numerous educational programs to students.

**TEA WORKERS OF BANGLADESH**

Tea industry gets priority among the highly labor oriented industry. Tea industry can hardly imagine without worker. Preparing land, plantation, nursing the plant, pesticide, picking tea leaves, tea process in multi stages a large number of worker is necessary for this industry. We often only see the worker in tea leaf picker. But in various sections from seed bed to consumption of tea thousands of tea workers involve here.

Once upon a time tea worker are defined as ‘Coolie’ which means Indian or Chinese rental labor. Literarily Coolie means the unskilled labor from India and China who works
temporarily with low wages. Term coolie was then known to Assam Bengal Railway labors who also engage in Chittagong railway too. According to Oxford English Dictionary Coolie an offensive word for a worker in Eastern countries with no special skills or training.

The workers’ requirement in the tea industry can be classified into three categories: those for plucking, those for field maintenance and those for capital field development. The operation of plucking, which includes the bulk of labor absorption, accounts for as much as 70 percent of total workdays (Sivram, 1996). Plucking is primarily done by women. Sometimes men are employed in this job in peak season.

Men are generally employed in the field maintenance and capital development. The job of field maintenance includes fertilizing, weeding, pruning, mulching, spraying insecticide and irrigation. Women are also sometimes employed in these operations, particularly in fertilizing, weeding and pruning. Capital field development involves three activities: new planting, replanting and filing of vacancies. Generally men are employed in all these activities. When they came first, they got into four-year contracts with the companies. That was the beginning of their servitude.

More than a century and half or four generations have passed since the tea plantation workers settled in the labor lines. Their lives and livelihoods remain tied to the labor lines ever since. They are people without choice and entitlement to property. In addition to the wages, which is miserably low, they get some fringe benefits. The houses in the labor lines are given by the employer that comes first on the list of fringe benefits. One worker gets one house that is supposed to be maintained by the employer.

The wages, daily or monthly is the single most concern. The maximum daily cash pay for the daily rated worker in 2008 was Taka 32.50 (less than half a US$). This is a miserable pay having a severe effect on the daily lives of the tea workers. Although the workers get rations at a concession, a family can hardly have decent food items on their plate.

They indeed have very poor quality and protein-deficient meals. Their physical appearance tells of their malnourishment. Bangladesh Cha Sramik Union (BCSU) (Bangladesh Tea Labor Union) that represents the workers and Bangladesh Tea Association (BTA) that represents the employers sign a memorandum of agreement every two years to fix the wages.

The last memorandum of agreement went into effect on 1 September 2005. The two-year period of effectiveness of the agreement ended on 31 August 2007 [during the state of emergency in the country]. It was due to the state of emergency and squabbles between rival groups in Bangladesh Cha Sramik Union that no agreement between the two parties was signed in due time.

However, in the absence of any agreement, the owners increased wages by Taka 2.5 as an interim arrangement. What is important to note here is that BCSU in its charter of demands placed to the owners have demanded increase of wages by up to 100 per cent, but the owners increased it by Taka 2 every two years, which the BCSU accepted in the end. The newly elected leadership (in 2008) of the BCSU, in its charter of demands of 2009, demanded that the cash pay of the daily rated workers be increased to Tk.90.00 from Tk.32.50.
It is yet to be seen how the employers respond to the demands of BCSU. Fringe benefits other than houses include some allowances, attendance incentive, rations, access to khel land for production of crop (those accessing such land have their rations slashed), medical care, provident fund, pension, etc. BTA calculates the cumulative total daily wage of a worker at Tk.73. The newly elected leaders in BCSU have a different calculation, which is lower than that of BTA (Philip Gain, 2009).

The work condition of the tea workers who spend most of their working time under the scorching sun or getting soaked in rains is a concern. A woman tealeaf picker spends almost all her working hours for 30 to 35 years standing before she retires. The working hours for the tealeaf pickers, mostly women, are usually from 8 AM to 5 PM [7-8 hours excluding break for lunch] from Monday to Saturday. Sunday is the weekly holiday. To earn some extra cash, the extra work brings additional grief. The key questions to ponder: How longer will the tea communities stay confined to the labor lines? Will they continue to live as people without choice and entitlement to a land they have tilled for four generations? The employers probably want the status quo maintained for a steady supply of cheap laborers. But the tea communities, little more conscious now than before, want justice done to them. They want strategic services from the State and NGOs in the areas of education, nutrition and health, food security, water and sanitation, etc. They also want to see their languages, culture, and social identity protected.

RESULTS AND DISCUSSION

Socio-Economic of the Tea-Garden Worker

The tea workers are not just poor, they are a particularly deprived marginal community in captive situation. They have limited scope to integrate with the people of the majority community and they face great difficulties in exploring livelihood options outside the tea gardens.

Table 1

<table>
<thead>
<tr>
<th>Sex</th>
<th>(%)</th>
<th>Age range</th>
<th>(%)</th>
<th>Marital Status</th>
<th>(%)</th>
<th>Service Type</th>
<th>(%)</th>
<th>Salary (takeMonthly)</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>63.3</td>
<td>0-20 yrs</td>
<td>28.3</td>
<td>Unmarried</td>
<td>25.8</td>
<td>Daily</td>
<td>45</td>
<td>1500-2500</td>
<td>45.8</td>
</tr>
<tr>
<td>F</td>
<td>36.7</td>
<td>20-40 yrs</td>
<td>53.3</td>
<td>Married</td>
<td>73.3</td>
<td>Weekly</td>
<td>33</td>
<td>2500-3500</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40-60 yrs</td>
<td>15.8</td>
<td></td>
<td></td>
<td>Monthly</td>
<td>21</td>
<td>3500-4500</td>
<td>30.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60-80 yrs</td>
<td>1.7</td>
<td></td>
<td></td>
<td>Daily</td>
<td>45</td>
<td>4500-5500</td>
<td>9.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>80+yrs</td>
<td>.8</td>
<td></td>
<td></td>
<td>Weekly</td>
<td>33</td>
<td>5500 &lt;</td>
<td>10.0</td>
</tr>
</tbody>
</table>

The above table: 1 depicts that 63.3 percent of the respondent are male and rest of the 36.7 percent are female. Generally the male worker performs all kinds of tea garden related duties while the female workers mainly engage in picking tealeaf. Female worker often sees to engage in cleaning the tea garden, watering seed bed, plantation of tea plant etc. women worker also works dawn to dusk as well as perform the family duties. Most of the tea worker
belongs to the age group of 20-40 years which is 53.3 percent while below this range is also available. About 28 per cent of the tea workers are below 18 years old. They can not go to school due to financial constraints. They have to support his family’s earning wheel. Besides their parents can not meet up his/her basic needs as a result he is forced to work in the tea garden with minimum wages. Most of the workers marry in the very early age. So the rate of married worker is higher (73.3 percent) than unmarried (25.8 percent).

Service period of the worker vary on the basis of region. In the old tea garden workers are working from generation to generation while in the new region (Panchagar) most of the workers are temporary and daily basis. Most of them are working there for less than one year. On the other hand worker in Sylhet region are working for their lifetime on weekly and daily basis. As an export oriented industry tea worker get the lowest salary. At present it is very hard to find a labor with taka 69 in Bangladesh except tea worker. Most of the tea worker (45.85 percent) in this research gets only 69 taka daily or 414 taka weekly or monthly 2500 taka (table-1).

Authority pays the wages mainly on daily basis as a large number labor works in temporary. Only 30 per cent of workers get salary of 3500-4500 taka monthly. A large number of workers also get salary on weekly basis.

Constraints of Receiving Formal Education
Tea garden worker do not get minimum facilities for livelihood, receiving education is beyond question. The fact has found out from this study. They really lead a miserable life to think about education. They speak out mainly about the following constraints (table: 2) during the survey.

<table>
<thead>
<tr>
<th>Type of constraints</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>&lt;tk 2500(46%)</td>
</tr>
<tr>
<td>Capacity to bear expenses</td>
<td>&lt;tk 3500-4500 (30.0%)</td>
</tr>
<tr>
<td>Lack of time (in a week)</td>
<td>6 days (76%)</td>
</tr>
<tr>
<td>Work in extra hour</td>
<td>7 days (23.3%)</td>
</tr>
<tr>
<td>Proper education institution in proper place</td>
<td>Yes (56%)</td>
</tr>
<tr>
<td>Timing of educational institution</td>
<td>No (44%)</td>
</tr>
<tr>
<td>Chance for dropped or aged</td>
<td>Yes (25%)</td>
</tr>
<tr>
<td></td>
<td>No (72%)</td>
</tr>
</tbody>
</table>

In the table: 2, we find that about half of the tea garden worker earn monthly less than 2500 taka by which anyone can hardly lead his life as result 83 percent of the labor cannot bear the expenses of education.
They also do not get time as they have to work for most of the days in a week. Often they work for extra hour.

A mentionable number of workers (72 percent) speak out about the lacking of proper educational institution in proper place. Tea worker cannot adjust with the timing of these institutions. Besides these there are a few scopes for the aged, dropped or deprived to admit in these educational institutions.

The case study and observation of their living area, few other problems have been found such as unwillingness of the authority, lack of effective governmental initiatives, lack of willingness of the labor, big family size, shyness in case of dropped or aged which will be considered as predicaments in receiving education.

Educational Status of the Tea-Garden Worker of Bangladesh

Where livelihood is uncertain, education is far cry. This study has intensively explored the educational condition of the tea garden workers which are presented in figure: 1.

The figure depicts the educational scenario of the tea garden workers. Most of them live hand to mouth.

We see also the reflection of their life in this figure as about 39 percent worker are illiterate while only 40 per cent have gone to school for class five that means maximum worker could not overcome the primary level. The study is also found that 72 of the respondent have heard about Bangladesh Open University (BOU).

Figure 1
Educational status of tea-garden worker in Bangladesh

The figure depicts the educational scenario of the tea garden workers. Most of them live hand to mouth. We see also the reflection of their life in this figure as about 39 percent worker are illiterate while only 40 per cent have gone to school for class five that means maximum worker could not overcome the primary level. The study is also found that 72 of the respondent have heard about Bangladesh Open University (BOU).
<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Availability of NGO</td>
<td>72.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>2</td>
<td>Chance for the target group</td>
<td>25.5%</td>
<td>72.0%</td>
</tr>
<tr>
<td>3</td>
<td>Response about hindrances</td>
<td>85.0%</td>
<td>8.3%</td>
</tr>
</tbody>
</table>

There are few renowned NGOs (72.5 percent) which are working to provide education for worker's children.

But it is a matter like “water and water everywhere but there is not a single drop to drink” as most of the NGO provide education for the children and only up to primary level.

As a result, the adult workers who have been dropped out due to various reasons can not study there.

Only few child labors (25.5 percent) go to those NGO operated school and most often they also dropped out. 85 percent of the respondents say about their problems to start education or receiving education.

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Opportunity to watch TV</td>
<td>94.2%</td>
</tr>
<tr>
<td>2</td>
<td>Use mobile</td>
<td>17.5%</td>
</tr>
<tr>
<td>3</td>
<td>Watched BOU program on TV</td>
<td>17.5%</td>
</tr>
<tr>
<td>4</td>
<td>Interested about BOU</td>
<td>72%</td>
</tr>
</tbody>
</table>

In the labor line worker (94 percent) has the opportunity to watch television for a fixed period but always it’s not possible to watch whenever they want. Often the management does not favor it.

They also claim that in most of the labor line there is no electricity facility. As a result, they can hardly watch BOU program. Besides, this they like to watch recreational program on television.
Tea workers (72 percent) express their enthusiasm to study at BOU. They urge us to offer eligible program for them and talk to authority about their interest. They think that owner can help them a lot to avail this opportunity.

It makes us happy that tea worker like to restart study after a long break, dropped or despite being disadvantaged. About 68 percent worker like to start study again while only 31 percent think it’s as impossible and assert various kinds of problem which has already defined by them.

**STATISTICAL TEST**

The result of the study reveals that the tea garden workers are leading a miserable life. lack of basic needs among their facilities have been deemed their opportunities for receiving education from any sources. In this section an attempt has been conducted to show statistically whether this constraints and status are significantly impact their way in restarting education.

Table: 5
Cross tabulation on educational status vs changing intention current profession of the tea garden worker of Bangladesh

<table>
<thead>
<tr>
<th>Educational status of the respondents</th>
<th>Desire to change current Profession</th>
<th>Total</th>
<th>Symmetric Measures (c)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Other</td>
</tr>
<tr>
<td>Illiterate</td>
<td>32</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Class Five</td>
<td>40</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Class Eight</td>
<td>9</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>94</td>
<td>24</td>
<td>1</td>
</tr>
</tbody>
</table>
The chart figures out that maximum workers are illiterate only a few percent is five passed so it’s very difficult to change their job concerning their educational status. Both Phi and Cramér’s V test reveals the same result that is insignificant (>0.05) which will be suggesting that it requires more education for changing their current profession.

Table: 6
Cross tabulation on wages of the respondents and restarting of education

<table>
<thead>
<tr>
<th>Monthly wages (tk) of the respondents</th>
<th>want to restart education</th>
<th>Total</th>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500-2500</td>
<td>Yes 33</td>
<td>22</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2500-3500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3500-4500</td>
<td>Yes 26</td>
<td>10</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4500-5500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5500 through highest</td>
<td>Yes 9</td>
<td>3</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Payment of the wages varies from garden to garden or authority. In few gardens tea workers are paid on daily basis and in few gardens on weekly basis. In the above chart wages have been converted into monthly basis. The Chi-Square test of their salary and restarting education shows insignificant (Chi-Square > 0.05). That means it is quite impossible to carry out the educational expenses or other types necessity about education with low income. In this study most of them ask for financial support to restart education.

Table: 7
Cross tabulation between the worker who have heard about BOU and their interest

<table>
<thead>
<tr>
<th>Heard about BOU</th>
<th>Interested to BOU</th>
<th>Total</th>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes 76</td>
<td>10</td>
<td>86</td>
<td>32.610</td>
<td>3</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>No 13</td>
<td>18</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Yes 0</td>
<td>2</td>
<td>2</td>
<td>30.971</td>
<td>3</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>No 1</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>30</td>
<td>120</td>
<td>120</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We have already got primary idea result about their interest on BOU. Pearson Chi-Square test also reveals about their interest on BOU. It seems very much rational (Chi-Square value < 0.05).
RESEARCH FINDINGS IN BRIEF

Every stages of this study have been accomplished according to the objectives. Major findings can summarize in the following:

- Tea workers have no minimum opportunity of food, residence, treatment. Recreational and educational opportunities are far behind to mention. Thus, this study claims that they are truly belongs to the vulnerable group.
- Only 40 percent of the worker went to school once upon a time in their life and now most of them earn only 1500-2500 taka monthly by working in the tea garden.
- In the study area 72 percent worker have heard about Bangladesh Open University and about 68 per cent of the worker are interested to start education again. They also emphasize on education to in favor of their interest on changing their profession and life.
- There is mentionable number (72.5 per cent) NGOs working in the tea garden but a little scope for the aged to study there.
- Tea workers identify financial constraint as another important problem in the flow of getting education. There monthly income does not (Chi-square> 0.05) support their interest about restarting studying.

- Tea workers claim that they are leading a miserable life. Union leaders do not care about their problems at all. They urge the government to interfere directly easing their sufferings.

CONCLUSION

Plainly speaking a lot of plan, study and research have been conducted concerning the tea garden worker but they have got few facilities recommended. The concern authority seems quite reluctant for the development of this group of people. Most of the managements think that if they become educated they won’t work in the garden. We do not agree with this view because it is government’s responsibility to provide all kinds of basic need for its citizen, how he will return it that can not be the question at all. But it can speak boldly that state will get something better.

From this study, we have got many evidences that this group of people undoubtedly belongs to a vulnerable group. They do not get the minimum requirements for their life. They have no sufficient food, house, clothes, education and medicine is so far to mention. More than 50% of the labors get only 69 taka as daily or 414 taka weekly and 50% of the workers are absolute illiterate who never attend any kind of school to study. But we see the ray of hope because about 40% of the worker has studied up to class five. We can uphold them for better life. If we can’t do that at least we can do something for their children. Generally Project Development Unit, Education Trust and Labor Welfare Fund operate the educational program for the tea worker along the government side while different types of NGO’s also provide education for tea garden workers.

Among the many recommendations found from this study we came to know that they need financial allowances for the continuation of their study. From the field work it seems to us
that if Bangladesh Tea Board and Bangladesh Open University (BOU) jointly take any initiatives for tea worker, fruitful something may happen. They expressed a breath of surprised and satisfaction hearing about Bangladesh Open University (BOU) working as for disadvantaged, dropped, and aged. They earnestly request us to do something for them from the BOU. Everybody will agree that it is high time to go for pragmatic action for this thousand of marginal people in the tea garden.

RECOMMENDATIONS

From this study researcher has identified the following recommendations need to materialize as early as possible-

- Tea worker should be defined as labor under the Labor Act 2006. They should give all kinds of benefits under this Act. Department of Labor, Department of Inspection of Factories and Establishment and the Labor Court should be played active role in ensuring the rights of tea worker.

- Tea Board, Bangladesh Tea Research Institute, Export Promotion Bureau and Bangladesh Tea Association, Labor Welfare Fund should monitor locally whether tea worker are getting their labor value or not.
- Living condition in labor line is too much unhygienic, crowdie, gloomy and poor. Controlling and monitoring authority should ensure it that garden management will arrange a minimum living place. Electricity, gas and pure drinking water should provide in the labor line. Family planning team should pay attention in the labor line to give advice and medicine on population control and reproductive issues.
- It has been seen that one more NGO is operating primary education in the same area whether there is no secondary school. As a result a five passed student has to stop his study. The NGOs should work articulately.
- The NGOs which are already in operation can extent their service for the aged and up to secondary level. In a cluster of garden a secondary school can run smoothly.
- Trade union like Bangladesh Cha Sramik Union (BCSU), Chittagong Cha Sramik Union (CCSU) should raise their voice strongly.
- Bangladesh Open University can easily offer junior school certificate (JSC) program for the five passed 40% tea worker. It has the opportunity to offer different non-formal programs like livestock, fisheries and other agro-production for the interested tea garden worker.
- Bangladesh Open University can support different local NGOs which are already operating in this area and set up tutorial centre mainly in the high density of tea garden area which may be more effective.

Acknowledgement: Unattended sufferings of the tea worker had stirred me a lot during my visit in the tea garden few years ago. Tea workers live an excluded life deprived from the basic needs of a human being. I possessed the feelings silently in my heart. At last Bangladesh Open University (BOU) offers the opportunity by giving a nod in the proposal of working for the tea garden worker. So, heart feel gratitude first goes for BOU. It is the outcome of a team work which has accomplished both from primary and secondary
information. Rahman, Pranesh Das in Panchagar and Anil Sarker, Russel Miah in Sylhet have accompanied with our data collection team. They have extended their helping hand by giving suggests on how to reach the tea garden worker. Manager of Lakkatura Tea Estate also deserves thanks. Primary data could not be collected without their support. Topon Kumar Palit and Md. Zakirul Islam, as our colleague gave us valuable information in mapping the area for data collection respectively in Sylhet and Panchagar.

We have got much help from Documentation officer of BOU library, SEHD (Society for Environment and Health Development) documentation centre, Central Public Library. Specially director of SEHD, Philip Gain has provided a lot of secondary materials on the tea garden workers livelihood and socio-economic condition which has helped us to build up a pragmatic questionnaire for collection of primary data besides incorporating valuable knowledge for working in this issue.

Dr. Iqbal Hossain’s direction and support for formulation of questionnaire are beyond mention. We are very much grateful to Romesh Sana for playing pivotal role in statistical analyses of data and remain thankful to Mr. Chayon Kumar Saha, Md. Badrul Hasan and Rezwanul Alam for giving valuable support in report preparation. We again pay our gratitude to BOU authority for its generous initiatives by funding this study.

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THE EVALUATIONS OF THE COLLEGE STUDENTS’ PERCEPTIONS ON DISTANCE EDUCATION FROM THE POINT OF THE TECHNICAL AND EDUCATIONAL FACTORS

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ABSTRACT

The purpose of the research was to investigate the college students’ opinions about distance education courses. The distance education questionnaire (DEQ) was developed for evaluating the perceptions of the students. The DEQ was conducted on 66 college students enrolled in the compulsory courses. The DEQ consisted of 18 items and two factors covering the technical and educational factors in the light of statistical analyses. When the results of the research were generally evaluated, it could be said that the majority of the students were not pleased with the distance education courses from the point of the technical (connection, accessibility, etc.) and educational (interaction, communication, etc.) factors. Some implications were presented regarding the results.

Keywords: Distance education; distance learning; higher education; perception.

INTRODUCTION

Many teaching methods (inquiry-based learning, peer instruction, problem-based learning, brain-based learning, cooperative learning, and project-based learning, etc.) instead of traditional instruction have been developed so far by the researchers (Ebrahim, 2012; Author, 2014; Houff, Klinger, & Coffman, 2013; Kogan & Laursen, 2014; Puente & Swagten, 2012). The common characteristic feature of those methods is the application of active learning. Students engage, explore, explain, extend, and evaluate the knowledge in and out of the classroom and instructor mentors to the students in the active learning. On the other hand, recently distance education has become popular as an alternative teaching method. The number of students enrolled in universities increased dramatically over the past years in worldwide (Bolliger & Inan, 2012). Therefore, the institutions of higher education include universities, faculties, vocational schools of higher education, and institutes, etc. could address the demand in terms of campus, dormitory, building, instructors, laboratory, classroom, and time, etc. As a result of this, the institutions of higher education have started offering distance education courses/programs (Saba, 2011).

Many researchers (Anderson & Ponti, 2014; Harvey, et al., 2014; Rovai, 2002; West, 2011, Young, et al., 2001; Young 2006) have examined the effects of distance education on teaching and learning in many different ways (the roles of students and instructors, the comparisons between face to face learning and distance learning, the cognitive perspectives of distance learning, and the effects of distance education on metacognitive strategies, etc.).
These studies showed that distance learning differs from face to face learning in a number of ways covering communication, interaction, flexibility, and the roles of students and instructors, etc. It could be said that distance education is an effective teaching strategy according to traditional instruction pedagogically (Gaytan & McEwen, 2007). Many studies are needed for determining the effects of distance learning and education; therefore distance education should be investigated in every aspect.

There are some advantages and disadvantages of the DE courses/programs as reported by the researchers (Bolliger & Inan, 2012; Exter et al., 2009; Kanuka & Jugdev, 2006; Motteram & Forrester, 2005; Rovai, 2002; Shin, 2003; Tu & McIsaac, 2002, West, 2011).

Some advantages of distance education courses/programs could be categorized as follows: a) the students could easily access online courses/programs regardless of location and time; b) the students could organize their study plans; c) the students could participate in an accelerated degree programs; d) the students could freely express the opinions and feelings in online courses; e) the students could freely share information with other students in distance learning courses/programs.

Some disadvantages of distance education courses/programs could be listed as follows: a) face-to-face personal interaction between students and instructor might be limited in online courses; b) lack of interaction amongst students enrolled in distance education courses/programs might be restricted; c) the students might encounter the issues of negative emotions (isolation, hopelessness, stress, anxiety, boredom, frustration, overload, and loneliness, etc.) technical problems (disconnectedness, network, and online communication, etc) and economical problems (the usage of old technologies and software, cost etc.); d) the instructor cannot integrate collaboration tools (discussion forum, chat rooms, etc.) into distance education courses/programs activities.

The purpose of the research
The purpose of the present study was to examine students’ opinions about distance education courses. The opinions of the students were evaluated and collected with distance education questionnaire. The research question investigated was: Do the students prefer face to face learning or distance learning?

METHOD

Participants
This study was performed in a two-year college classroom. The participants selected in this study were 66 students from four different departments (i.e., Industrial Glass and Ceramics, Geotechnic, Drilling Technology, and Natural Building Stone Technology) at a state university in the Turkey. Of the participants, 24 students (36.40%) were female while 42 (63.60%) were male. Distance education questionnaire (DEQ) was given to students who completed compulsory courses which are suggested by council of higher education successfully. These courses cover History, Foreign Language, and Literature.

Instrument and Procedures
The DEQ was developed for this study by the researcher. The literature was examined to develop the basis for the distance education questionnaire (Barnard-Brak & Shiu, 2010; Bolliger & Inan, 2012; Chaney et al., 2007; Robert et al., 2005, Tu, 2002; Young 2006). 12 students were required to write an essay about their perceptions during distance learning.
Also, several experts in distance education and six volunteer students from four different departments at the university were interviewed about distance education courses. The experts were instructed to

- assess the clarity of each item;
- suggest changes for any unclear items;
- represent the items' relevance; and
- remove or add any items.

The items reported in the literature obtained from essays, interviews, and according to the evaluation report of the experts were categorized to construct the items of the questionnaire. The DEQ initially consisted of 52 positive and 6 negative statements. Respondents rated each item on a 5-point Likert scale, with the following scale anchors: 1=strongly disagree (SD), 2=disagree (D), 3=undecided (U), 4=agree (A), 5=strongly agree (SA). The validation and verification analyses were performed by giving the questionnaire to the students. Statistical analyses were performed with IBM SPSS Statistic 22.

The clarity of the items was pilot tested on 120 students not involved in the current study. These students’ responses were submitted to statistical analyses to establish validity and reliability. The pilot test data were analyzed.

The statistical analysis indicated that the result of Bartlett’s test of sphericity was 1294.77 for the questionnaire (p<0.01). The questionnaire did not produce an identity matrix. Thus, multivariate normal distribution was accepted for factor analysis (Hair et al., 2009).

The value of 0.77 was obtained for Kaiser-Meyer-Olkin (KMO>0.60) from the principal component analysis. Rotation analysis was conducted with the principal component analysis and varimax method to identify the components. Two components having eigenvalues greater than 1.00 (Pett et al., 2003) were defined.

The validity was confirmed with the total variance percentage greater than 41% (Kline, 2005). Validity analysis enabled to include 18 items having the factor load of 0.50 in the questionnaire. The items with lower factor load (≤ 0.50) were excluded. The factor distribution and factor load of these items are represented in Table 1. Total item load of 18 selected items changed from 0.886 to 0.519.

The factors in the DEQ were defined as “Technical Factor and Educational Factor”. The calculated variance percentage for the first factor “Technical Factor” including 8 items was 31.27%.

The calculated variance percentages for the second factor “Educational Factor” was found as 41.16% for 10 items. The first factor dealt with technical problems while the second factor dealt with educational issues.

The eigenvalues for the factors were 5.63 and 7.41, respectively. Two factors also accounted for 72.44% of total variance. Cronbach’s alpha value of the questionnaire was 0.90. The technical and educational factors’ Cronbach’s alpha values were found 0.81 and 0.89, respectively.
Table: 1
The Distribution of Factors and Factor Loads of the Items

<table>
<thead>
<tr>
<th>Items</th>
<th>Technical Factor</th>
<th>Educational Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I think that the technical problems I encounter should be solved as soon as possible.</td>
<td>0.886</td>
<td></td>
</tr>
<tr>
<td>2 I think that web-pages of the courses are functional.</td>
<td>0.821</td>
<td></td>
</tr>
<tr>
<td>3 I think that the university provides the instructors necessary and sufficient educational service for the distance education courses.</td>
<td>0.805</td>
<td></td>
</tr>
<tr>
<td>4 I could follow the distance education courses indicated in the schedule.</td>
<td>0.773</td>
<td></td>
</tr>
<tr>
<td>5 I can easily connect with the distance education courses.</td>
<td>0.756</td>
<td></td>
</tr>
<tr>
<td>6 I could return to the examination questions if I have enough time.</td>
<td>0.753</td>
<td></td>
</tr>
<tr>
<td>7 I think that it is better to give information and tutorial about the system before starting the courses.</td>
<td>0.705</td>
<td></td>
</tr>
<tr>
<td>8 I could easily take mid-term and final examinations online.</td>
<td>0.562</td>
<td></td>
</tr>
<tr>
<td>9 I think that distance education is more suitable for numerical courses.</td>
<td>0.851</td>
<td></td>
</tr>
<tr>
<td>10 I could easily communicate with friends on the system.</td>
<td>0.847</td>
<td></td>
</tr>
<tr>
<td>11 I think that distance education courses are as effectively as the courses given in class.</td>
<td>0.795</td>
<td></td>
</tr>
<tr>
<td>12 I think that distance education is more suitable for language courses.</td>
<td>0.774</td>
<td></td>
</tr>
<tr>
<td>13 I think that the contents of the mid-term and final examinations are similar to the contents of the topics.</td>
<td>0.741</td>
<td></td>
</tr>
<tr>
<td>14 I would like to continue distance education courses in the future.</td>
<td>0.734</td>
<td></td>
</tr>
<tr>
<td>15 I think that the presentations and videos of the distance education courses are understandable.</td>
<td>0.709</td>
<td></td>
</tr>
<tr>
<td>16 I could easily communicate with instructors.</td>
<td>0.645</td>
<td></td>
</tr>
<tr>
<td>17 I think that distance education courses are informative.</td>
<td>0.616</td>
<td></td>
</tr>
<tr>
<td>18 I think that distance education courses are more motivational than traditional courses.</td>
<td>0.519</td>
<td></td>
</tr>
</tbody>
</table>

RESULTS AND DISCUSSION

The results of the distance education questionnaire were categorized into the technical and educational factors as follows.

Technical Factor
This factor dealt with technical problems of the distance education system which covers web-page of the courses, connection, accessibility, and usefulness, etc. The students’ respondents for this factor were given in Table: 2.
Table: 2
The Percentage Distributions of the Students Concerning Technical Factor

<table>
<thead>
<tr>
<th>Items</th>
<th>SD</th>
<th>D</th>
<th>U</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I think that the technical problems I encounter should be solved as soon as possible.</td>
<td>9.1%</td>
<td>6.1%</td>
<td>13.6%</td>
<td>25.8%</td>
<td>43.9%</td>
</tr>
<tr>
<td>2 I think that web-pages of the courses are functional.</td>
<td>40.9%</td>
<td>6.1%</td>
<td>24.2%</td>
<td>22.7%</td>
<td>6.1%</td>
</tr>
<tr>
<td>3 I think that the university provides the instructors necessary and sufficient educational service for the distance education courses.</td>
<td>42.4%</td>
<td>15.2%</td>
<td>16.7%</td>
<td>18.2%</td>
<td>7.6%</td>
</tr>
<tr>
<td>4 I could follow the distance education courses indicated in the schedule.</td>
<td>45.5%</td>
<td>10.6%</td>
<td>13.6%</td>
<td>15.2%</td>
<td>10.6%</td>
</tr>
<tr>
<td>5 I can easily connect with the distance education courses.</td>
<td>43.9%</td>
<td>18.2%</td>
<td>12.1%</td>
<td>13.6%</td>
<td>10.6%</td>
</tr>
<tr>
<td>6 I could return to the examination questions if I have enough time.</td>
<td>54.5%</td>
<td>12.1%</td>
<td>15.2%</td>
<td>12.1%</td>
<td>6.1%</td>
</tr>
<tr>
<td>7 I think that it is better to give information and tutorial about the system before starting the courses.</td>
<td>4.5%</td>
<td>7.6%</td>
<td>19.7%</td>
<td>27.3%</td>
<td>40.9%</td>
</tr>
<tr>
<td>8 I could easily take mid-term and final examinations online.</td>
<td>48.5%</td>
<td>12.1%</td>
<td>15.2%</td>
<td>15.2%</td>
<td>7.6%</td>
</tr>
</tbody>
</table>

- 70% of the students would like the technical problems they encounter to be solved as soon as possible.
- 47% of the students think that web-pages of the courses are not functional.
- 58% of the students think that the university does not provide the instructors necessary and sufficient educational service for the distance education courses.
- 56% of the students do not want to follow the distance education courses indicated in the schedule.
- 62% of the students do not easily connect with the distance education courses.
- 67% of the students could not return the examination questions if they have enough time.
- 68% of the students think that it is better to give information about the system and apply it before starting the distance education courses.
- 61% of the students could not easily take mid-term and final examinations online.

Educational Factor
This factor dealt with educational issues which include communication and interaction between the instructor and the students, motivations and perceptions of the students, etc.

The students’ respondents for this factor were given in Table: 3.
Table 3
The Percentage Distributions of the Students Concerning Educational Factor

<table>
<thead>
<tr>
<th>Items</th>
<th>SD</th>
<th>D</th>
<th>U</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think that distance education is more suitable for numerical courses.</td>
<td>45.5%</td>
<td>16.7%</td>
<td>12.1%</td>
<td>10.6%</td>
<td>13.6%</td>
</tr>
<tr>
<td>I could easily communicate with friends on the system.</td>
<td>42.4%</td>
<td>13.6%</td>
<td>18.2%</td>
<td>12.1%</td>
<td>13.6%</td>
</tr>
<tr>
<td>I think that distance education courses are as effectively as the courses given in class.</td>
<td>51.5%</td>
<td>10.6%</td>
<td>10.6%</td>
<td>6.1%</td>
<td>19.7%</td>
</tr>
<tr>
<td>I think that distance education is more suitable for language courses.</td>
<td>47.0%</td>
<td>10.6%</td>
<td>15.2%</td>
<td>9.1%</td>
<td>18.2%</td>
</tr>
<tr>
<td>I think that the contents of the mid-term and final examinations are similar to the contents of the topics.</td>
<td>22.7%</td>
<td>7.6%</td>
<td>43.9%</td>
<td>18.2%</td>
<td>6.1%</td>
</tr>
<tr>
<td>I would like to continue distance education courses in the future.</td>
<td>48.5%</td>
<td>12.1%</td>
<td>15.2%</td>
<td>6.1%</td>
<td>18.2%</td>
</tr>
<tr>
<td>I think that the presentations and videos of the distance education courses are understandable.</td>
<td>40.9%</td>
<td>19.7%</td>
<td>13.6%</td>
<td>13.6%</td>
<td>12.1%</td>
</tr>
<tr>
<td>I could easily communicate with instructors.</td>
<td>51.5%</td>
<td>13.6%</td>
<td>19.7%</td>
<td>7.6%</td>
<td>7.6%</td>
</tr>
<tr>
<td>I think that distance education courses are informative.</td>
<td>48.5%</td>
<td>12.1%</td>
<td>12.1%</td>
<td>12.1%</td>
<td>15.2%</td>
</tr>
<tr>
<td>I think that distance education courses are more motivational than traditional courses.</td>
<td>42.4%</td>
<td>13.6%</td>
<td>16.7%</td>
<td>9.1%</td>
<td>18.2%</td>
</tr>
</tbody>
</table>

- 60% of the students think that distance education is not suitable for numerical and language courses.
- Approximately 60% of the students think that they could not easily communicate with friends and instructors on the system.
- 62% of the students think that the distance education courses are not as effectively as the courses given in class.
- 44% of the students doubt that the contents of the mid-term and final examinations are similar to the contents of the topics.
- 61% of the students do not want to take and continue different distance education courses in the future.
- 61% of the students think that the presentations and videos of the distance education courses are not understandable.
- 61% of the students think that the distance education courses are not informative.
- 56% of the students think that the distance education courses are not more motivational than traditional courses.
CONCLUSION

The purpose of this study was to assess the quality of the distance education courses through evaluation of the students’ opinions. The instrument, called the DEQ (Distance Education Questionnaire) was developed for this study. When the students’ perceptions were generally evaluated, the students were not pleased with distance education courses. Some results according to the students’ perceptions were presented in terms of the educational and technical factors as follows:

- Distance education is not suitable for language and numerical courses. The students do not know how to learn and study the distance education courses in this system.
- Distance education does not sufficiently provide the communication and interaction between the instructor and the students. The students usually prefer to learn by asking relevant questions or topics.
- The students have great difficulty learning the topics in the distance education courses therefore these courses are not adequately effective in motivate the students.
- The instructors do not usually follow the syllabus in the distance education courses. Therefore the students could encounter some problems. As a result of this, in the mid-term and final examinations the students would be asked the questions concerning the topics which the students did not learn or know
- Many of the students do not want to choose and follow new distance education course in the next term.
- Most of the students have great difficulty in connecting the courses’ web-pages and they could not easily take mid-term, quizzes, and final examination. Therefore they think that web-pages of the courses are not sufficient from the technical aspect.
- Majority of the students could not return to the examination questions even if they have enough time. The system does not allow them to check the examination questions during the examination. This situation might negatively influence the performance of the students.
- The students and instructors had not been given any training concerning how to use online courses at the beginning.

IMPLICATIONS

When the results of the research were generally evaluated and interpreted in terms of the educational and technical factors, some implications might be offered as follows: The learning strategies (cognitive, metacognitive, and resource management strategies) in regard to distance education courses or programs should be taught to the students.

The office hours should be arranged to provide communication and interaction between the students and the instructor. Thus the students can ask the questions, they can learn the concepts and fundamental principles regarding the topics. From this aspect, one of the disadvantages in online courses could be eliminated. Besides, the hybrid model which consists of distance education and face to face education for active learning classroom environment could be used in the online courses. The students can easily make contact with class friends and instructor.

To enhance the motivation of the students in distance learning, the students should be given some responsibilities (projects, paper-based homework, and presentation, etc.)
providing their learning. Besides, live (not prerecorded) distance education courses should be designed instead of videos and presentations. By this means the students would like to attend and follow the courses.

The indicated syllabus should be followed and applied in online courses. The contents of examinations should be similar to the contents of the topics. The students should not be laid heavy burdens in distance education courses. The instructors should explain each topic as presented in the schedule. They should remark the students’ achievement level and background in online courses.

Web-pages of the courses should be user friendly. Students should easily connect the online courses and examinations regardless of time and place. They should go back and forth the examination questions during the examination period. Technical problems the students encounter should be solved as soon as possible. Besides, the students and instructors should be trained concerning distance education courses and they should practice on the system at the beginning.

To enhance the quality of distance education courses or programs, the economical, technical, and educational problems should be initially eliminated by the institutions of higher education, and then the instructors should be adequately prepared with the teaching strategies and techniques required to teach and conduct effective distance education courses/programs. Finally, the students should need to take their own responsibility for distance learning.

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CAUSES OF LOW STUDENT ENROLMENT AT THE ZIMBABWE OPEN UNIVERSITY’S HARARE-CHITUNGWIZA REGION FOR THE PERIOD 2008-2013

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ABSTRACT

The focus on Open and Distance Learning (ODL) has given people an alternative to acquiring and developing skills in areas of their choice especially those related to their jobs. While its introduction was met with different responses, it could be noted that in some cases ODL has been viewed with scepticism and in others it has been received with excitement and hope. Such euphoria and hope has in some instances contributed to an increase in enrolment in higher institutions of higher learning that offer the ODL model. However, these high enrolments have not been sustained in the case of the Zimbabwe Open University, Harare-Chitungwiza Region. There has been a decline in enrolments over the past five years.

This study sought to identify the causes of low student enrolment at the Zimbabwe Open University’s (ZOU) Harare-Chitungwiza Region was conducted. The study used the qualitative research methodology, guided by the grounded theory paradigm as it sought to answer the questions about ‘why’. Data were collected through open-ended questionnaires, interviews, participant observation and through the social medium. The data were collected from current students, inactive students and alumni. Data were analysed through open coding and axial coding. The study concluded that there was a causal relationship between student enrolments at the Zimbabwe Open University’s Harare-Chitungwiza Region and a number of causal factors and conditions. The main causal factors were knowledge about ZOU and the Region, the ODL mode of delivery, the ZOU image, policy changes on payment of fees and negative media reports about ZOU. The study recommends strategies that would help improve the ZOU image.

Keywords: Enrolments, Open and Distance Learning, Causal conditions

INTRODUCTION

The advent of independence in Zimbabwe in 1980 brought with it policy changes and reforms in many areas. In education such changes and reforms occurred in both lower and higher education. This was in keeping with two strictly related general guiding philosophies in education and development, that if a country were to be competitive in the knowledge economy it needs to take seriously expansion in higher education (Saint et.al., 2003), and
that a country that wants to be on trek to a successful knowledge economy needs to work on its ability to become a learning nation (Sharma, 2009). Zimbabwe became part of an ongoing global process that Rye (2009) calls the ‘massification of higher education’ especially in developing countries experiencing transition from the colonial elitist academic institutions that promoted bottle-neck education systems. In higher education, the bottle neck system which limited the number of students who were expected to enrol at university was abolished.

There was only one university in Zimbabwe at the time of independence, the University of Zimbabwe. With the expansion of the education system at both primary and secondary school, it was envisaged that relying on one university for the human resources development needs of Zimbabwe was not viable. The need for another university other than the University of Zimbabwe resulted in the establishment of the National University of Science and Technology in Bulawayo. However, this did not take care of the adult population that had already left formal school and were working. To cater for such a target group there was need to establish an Open and Distance University in Zimbabwe. The Centre for Distance Education was established in 1993 at the University of Zimbabwe, under the Faculty of Education. The centre offered degrees in education to teachers who had acquired certificates and diplomas in education. The first group of students was about 700. In 1996 the Centre for Distance Education was transformed to the University College of Distance Education and a variety of other degree programmes were introduced. This saw the enrolment increasing to about 3500. In 1999 the University College of Distance Education was further transformed to become the Zimbabwe Open University (ZOU). The Zimbabwe Open University was established by an Act of Parliament, The Zimbabwe Open University Act Chapter 25; 20, Number 12/98 (ZOU, University General Information and Regulations, 2007). It had the mission to empower people from different walks of life by developing their skills and full potential without disrupting their family and working life, through open and distance learning.

The Zimbabwe Open University became a fully fledged university in 1999, offering degree programmes in the fields of Science and technology, Business Management and Law, Humanities and Social Sciences and Health Sciences. Since the university now offered a variety of degree programmes, the student enrolment significantly increased to the extent that by 2007, the Zimbabwe Open University had become the biggest university in Zimbabwe in terms of student enrolment. For example in 2007 the total student enrolment at the Zimbabwe Open University was 19 676 against the country’s total university student enrolment of 41 000 (http://www.sarau.org/?q=uni_Zimbabwe Open University). In that respect, by 2007 the Zimbabwe Open University accounted for about half of university enrolment in Zimbabwe’s nine state universities.

This factor of student growth and other related factors in higher education had an impact on the higher education political playing ground whose effects are probably beginning to be felt at the ZOU currently. Green (1994) noted a number of factors influencing higher education especially in developing countries experiencing the massification of education that include the rapid expansion of student numbers against the backdrop of public expenditure worries and increasing competition within the educational ‘market’ for resources and students. Perraton (2007a), Gulati (2008) and Czerniewicz and Brown (2009) confirm that Green’s observation painted a reasonably accurate picture of what ensues in the education ‘market’ once higher education is ‘massified’ as the nation is fast becoming a learning nation. This
Study raises two strictly related questions: first, how did the rapid expansion of students at ZOU influence and, or, relate to public expenditure worries and second, to what extent did the rapid student enrolment at ZOU influence competition for resources and students in the education 'market'? This study insinuates that these two factors were probably primarily at play in the drop in student numbers at ZOU from 2008 to 2013. At the time of conducting this study the total student enrolment was just about 10 000, thus about half of what it was in 2007. The table below shows the student enrolment statistics from 2008 to semester 1, 2013 sourced at Harare/Chitungwiza Region.

Table: 1
Harare-Chitungwiza Region Student enrolment 2008-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester 1</th>
<th>Semester 2</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>5771</td>
<td>3598</td>
<td>9369</td>
</tr>
<tr>
<td>2009</td>
<td>4223</td>
<td>2203</td>
<td>6426</td>
</tr>
<tr>
<td>2010</td>
<td>2246</td>
<td>2530</td>
<td>4776</td>
</tr>
<tr>
<td>2011</td>
<td>3117</td>
<td>3032</td>
<td>6149</td>
</tr>
<tr>
<td>2012</td>
<td>2911</td>
<td>2390</td>
<td>5301</td>
</tr>
<tr>
<td>2013</td>
<td>2328</td>
<td>-------</td>
<td>(2328)</td>
</tr>
</tbody>
</table>

Source: ZOU Harare-Chitungwiza Region Data Base, 2013.

The second semester for 2013 is not included in the table as at the time of the study registration was in progress. In 2008, the total enrolment for the two semesters was 9369. The enrolment continued to decline from 2009 up to 2013. In 2009 student enrolment at Harare/Chitungwiza Region decreased by 31% when compared to the 2008 student enrolment. The 2010 student enrolment of 4776 represents a decrease of 49% and the 2011 enrolment of 6149 demonstrates a decrease of 34% when compared with the 2008 student enrolment. Similarly, the 2012 total enrolment of 5301 represents a decrease of about 43%. Whilst the 2013 enrolment figures are for the first semester only, it can be noted that they are far below the enrolment for semester 1, 2008. The enrolment for semester 1, 2013 represents a decrease in enrolment of about 60%, when compared with the enrolment for 2008, semester 1.

Similar drops in student enrolment in other institutions of Open and Distance learning (ODL) globally have been noticed. For instance, Numan, et. al. (2007:51) noted that, Bangladesh Open University (BOU), which like ZOU is the only university in Bangladesh that provides mass ODL, experienced increase in student enrolment in only four out of twenty of its programs while there was a rapid decline in student numbers in the rest of its programs. In its School of Education, on average there was a drop in student enrolment from 6000 in 1992-1993 (at its inception) to below 2000 in 2005. Numan, et.al. (2007:57) noted about five contributory factors to the decline in student numbers in the schools given as examples above. First, the delivery system to support students was not effective. Second, the programs were not necessarily on the job demand list. Third, there was no proper coordination between academic and administrative staff. Fourth, there were unnecessary delays in publishing the examination timetable and publication of results. Last, there is lack of motivational activities broadcast to reach distant viewers. Of interest to this study are the following questions: are these factors unique to BOU, or they also prevail at ZOU? What lessons can ZOU and any other ODL institution learn from these experiences at BOU? This
study investigates all five factors from the BOU experiences in a bid to explore the extent to which these factors influenced, and are influencing, student enrolment at ZOU.

STATEMENT OF THE PROBLEM

The Government of Zimbabwe has made a tremendous investment in the establishment of institutions of higher learning as a way of creating opportunities for all citizens who meet the basic entry requirements to advance their knowledge by acquiring knowledge and skills through different modes of learning that are convenient to them. That was the essence of establishing an Open & Distance Learning institution such as the Zimbabwe Open University. The responses to the degree programmes offered by ZOU have been positive as demonstrated by the enrolments figures of 2007.

The major problem is that from a high enrolment of about 20 000 students in 2007, the Zimbabwe Open University is now struggling to reach the 10 000 student enrolment figure. Similarly, student enrolment at ZOU Harare-Chitungwiza region had gone by almost half of what it was in 2008 by the end of 2012. The problem is therefore stated in question form: What are the factors that have influenced low enrolment levels at the Zimbabwe Open University, Harare-Chitungwiza Region?

PURPOSE OF THE STUDY

Despite phenomenal increases in student enrolments since its inception in 1999 from late 2008 onwards ZOU has experienced a decline in student enrolments. The purpose of the study is therefore to identify and analyze the factors contributing to the low student enrolment levels at the Zimbabwe Open University’s Harare/Chitungwiza Region.

Objectives of the study:

- To identify the factors influencing low student enrolment levels at ZOU’s Harare/Chitungwiza region.
- To code the factors into common analyzable units.
- To detect common and uncommon trends, correlations and relationships among the factors.
- To analyze the factors and their trends, correlations and relationships in a bid to arrive at recommendations for improving the student enrolment levels at ZOU.

LITERATURE REVIEW

Letseka and Maile (2008) made a number of observations about the high university drop-out rate in South Africa. They noted that of the 120 000 students who enrolled in South African universities in 2000, 30% dropped out in their first year, 20% dropped out in their second year and only 22% graduated within the specified three years for the Bachelors’ degree programmes. They noted that the most affected students were from black families with low economic status. Some of the students noted that they had to drop out of college to augment their low financial resources, and that they felt stressed, which contributed to low performance in their studies.
On a similar note, Murdoch, the executive director for teaching and quality at Monash South Africa noted that the graduation rate at South Africa’s 23 public universities ranged from 15 percent to 20 percent. Among the reasons identified for the low graduation rates were lack of funding to see them through their courses, lack of academic preparedness and lack of support from their universities, hunger and academics who were not adequately skilled to teach (Mtshali, 2013). In the case of South Africa, as noted above, the major causes of low enrolment and high drop-out rate in institutions of higher learning are very much related to the economic status of the parents or guardians responsible for the payment of fees. The Director-General of UNESCO Kouchiro Matsuura noted that whilst higher education enrolment in Africa had risen by 66% between 1999 and 2005, the average enrolment rate in Africa was still at 5% (http://www.universityworldnewa.com/article.php).

On a similar note, the Open University of Malaysia (OUM) was established in 2000 (Latif and Fadzil, 2007:1). It offers open and distance learning and it is the biggest ODL institution in Malaysia with a current enrolment of 51,319 students. Its mode of delivery in teaching and learning is very much similar to the ZOU mode. It includes the use of modules and other printed materials, face-to-face interaction at regional centres and online learning (Latif and Fadzil, 2007:2). Malaysia has expanded its operations to different regions within and to other countries. In the case of OUM, studies by Latif and Fadzil (2007:3) observed that student retention was an issue that had to be addressed through a coordinated effort. Such coordination included the academic staff and tutors working with the Centre for Student Management. Despite these efforts they found out that the attrition rate of 21.5% was still high. The major factors attributed to this high attrition rate were poor time management by students, problems related to work, poor study skills and lack of quality support services.

Of particular interest to this study are two reports, the 2010 report and a 2012 report, from North Carolina University’s Community College of Distance Education, about student enrolment figures in the years 2010 to 2012. Miller (2010) noted in the report that when distance education first became common around 1997 completion rates were around 50% but findings presented by F. Lokken, dean of Meadows Community Web College in April 2010 at the American Association of Community Colleges’ annual convention showed that the percentage had gone up to 72% which was just 4% below that of conventional learning. From 2007 to 2008 student growth doubled from 11% to 22% and according to Miller (2010) major contributory factors were three: first, economic down turn; second, new enrolment efforts; third, students hunting for jobs were attracted to the flexibility associated with ODL.

However, in its 2012 enrolment report published in January 2013, the University of North Carolina noted a 10.4% decrease in the number of students enrolled in distance education for the semester in question while the annual decline was 26.2%. The report attributes this decline primarily to policy changes at North Carolina University. The ZOU has experienced a number of policy changes in terms of fee payments, registration deadlines and many policy changes to this effect. The critical question in this regard is what bearing have these changes had on the decline in student numbers?

The pieces of literature reviewed agree in principle that the rapid expansion of student numbers in universities has a bearing on public expenditure and this tends to increase competition within the educational ‘market’ for resources and students. This study is interested to explore whether or not the decline in student enrolment at ZOU’s Harare
Region can be understood within this stated competition. Further, the pieces of literature agree that the delivery system to support students, suitable programs on the job demand list, proper co-ordination between academic and administrative staff, publishing of the examination timetable and results and motivational activities like broadcasting and, or, adverts in the print media to reach distant viewers or clients are very crucial factors that influence student growth in ODL institutions. This study explores these and other factors that came out of the data collection efforts during the study at ZOU’s Harare/Chitungwiza region.

**METHODOLOGY**

We opted for a Qualitative Methodology because of the nature of the subject and time allocated to do the research. We are cognisant of the various debates surrounding Quantitative and Qualitative methodologies respectively. For that reason we take it as prudent to do two strictly related things: first, we define what we mean by Qualitative methodology and second, we state the particular distinction between what we are referring to as Qualitative methodology and Quantitative methodology in this study.

By Qualitative Methodology we follow Strauss and Corbin (1990) who define it as any kind of research that does not produce findings or that does not make discovery through statistical procedures or any other means of quantification. Quantitative Methodology does the reverse. Quantitative Methodology makes discovery through statistical procedures and, or, any other means of quantification (Aligia and Gunderson, 2000:3). This does not mean in our current research we did not have quantifiable data. We do have quantifiable data but ultimately when we draw meaning from the data we do not attach statistical significance to quantities of the variables selected for study.

The rationale for our option was two-fold. First, the time allocated to do the research meant that we could not distribute enough questionnaires to a desirable sample big enough to represent our target population of students whom we placed in four categories namely: prospective students, existing students, alumni and inactive students. While we refer to some statistics our sample is best described as non-statistical (See Schatzman and Strauss, 1973). We classified the research as high priority and therefore, there was need to make sense out of data gathered in a way that is reliable enough to inform and hopefully direct policy. A type of Qualitative Methodology referred to as grounded theory was chosen to help us arrive at a well-constructed grounded theory that meets for central criteria for judging the applicability of theory to the phenomenon of low student enrolment levels at ZOU’s Harare-Chitungwiza Region.

The second reason why the methodology was chosen has to do with the nature of the subject of study and therefore, the type of material gathered. We set out to study whether or not a relationship existed between low student enrolment at ZOU’s Harare-Chitungwiza Region and several variables which we discuss in detail below. In Quantitative Research numbers or quantities are important in so far as they prove the statistical significance of the variables and therefore their worth in terms of drawing meaning from them. We argue that this makes a lot of sense in research involving inanimate objects and that involves decisions about space, particularly where reality is imposing itself upon individual consciousness from without. A Quantitative survey design suits such a study because its basic aim is to tell us how many members of a population have a certain opinion or characteristic or how often
certain events occur together or are associated with each other (Oppenheim, 1992). In such a study enumeration, accurate description and representativeness are key to any meaning that may be arrived at from the research. So, questions about ‘how many’ take centre stage in terms of drawing meaning from research.

However, where human beings are involved as part of the reality investigated, what is usually important is whether or not a relationship exists between the variables and the subject under investigation. The questions that take centre stage in this type of research are questions about ‘why’ so that the answers to those questions may guide policy soon enough before the associations of causality affects more human beings in the group or institution where they belong. Qualitative Research becomes suitable for this kind of study because it is less oriented towards representativeness and more towards finding associations and explanations, less towards descriptions and enumeration and more towards prediction (Oppenheim, 1992). Thus, it seeks more to answer questions about ‘why’ than questions about ‘how many’ even though usually the two types of questions may be related in that questions about ‘how many’ may often lead to questions about ‘why’ (Oppenheim, 1992).

Indeed, controversy surrounds how much interpretation of data there should be in Qualitative Research with three alternative positions coming to the fore. The first position is that data should not be analysed per se; rather the researcher must simply gather and present data as honestly as possible in a manner that the ‘informants’ or the ‘observations’ made by the researcher speak for themselves without undue influence from the researcher (Strauss and Corbin, 1990:21). Apart from a problem that the informants’ views about reality may not represent the ‘truth’ about what there is, this position fails to recognize the fact that there is no data collection and there is no data presentation without redaction. The researcher chooses what data to collect and chooses the appropriate manner to present this. Those choices are made in the light of the researcher’s editorial interests. This process in itself is interpretation. The same weakness goes for the second position that advocates for just an accurate description in the ‘analysis’ and ‘presentation’ of findings (Strauss and Corbin, 1990:21). The position recognizes that not all the data on a subject can be presented, so the principle is to present an accurate description of what is being studied. Again there is redaction and therefore, interpretation in reducing and ordering data.

In any case, what is the purpose of research if it is not to interpret findings in a way that brings reality to light?

In this study we agree with the third position that is primarily concerned with building a tightly woven explanatory theory that closely approximates the reality it represents and the conviction behind this position is that the development of theoretically informed interpretations is the most powerful way to bring reality to light (Strauss and Corbin, 1990:22). It is precisely for this reason that we opted for grounded theory to build a well-constructed grounded theory inductively derived from the study of the phenomenon or group of phenomena that it represents. The methodology here does not begin with theory and then prove it but rather begins with an area of study and what is relevant to that area of study is then allowed to emerge (Strauss and Corbin, 1990:23).

Data were collected systematically through questionnaires, structured interviews, participant observation (members who are little known or not known at all by the students stood and talked casually with students in queues as they collected their results or application forms or as they made inquiries of whatever nature) and 167 inactive students
were contacted through whatsapp and out of 167, 104 responded (a 62% response). Questionnaires were administered personally through clerks and some were posted on the ZOU website. We also collected data through studying relevant policy documents like regional and national administrative and academic regulations.

**DATA PRESENTATION AND ANALYSIS**

**Data Analysis Methods**

Once data were collected they were then analysed and interpreted. The analysis and interpretation comprised the processes of coding data, discovering, developing and provisionally verifying our theory. The study utilized a combination of open and axial coding respectively. We are cognisant of the fact that in grounded theory selective coding helps the study to reach a desired level of conceptualisation and abstraction. For our purposes here the former two types of coding suffice.

Open coding is a process of analysing data where happenings, events and other instances of phenomena are given conceptual labels, compared against one another in a bid to see whether or not they pertain to a similar phenomenon and ultimately then classified into categories (Strauss and Corbin, 1990:61). The categories are further conceptualised in terms of their properties. Properties are attributes or characteristics pertaining to a category (Strauss and Corbin, 1990:61). Once the properties of a category are identified each property is then located within a continuum in a process referred to as dimensionalizing; that is, breaking down the property into its dimensions (Strauss and Corbin, 1990:61). The properties and dimensions were noted down in the form of code notes.

Axial coding is a process of making connections between categories through an analysis of the causal conditions and, or, context of the events, happenings or instances of phenomena under study as well as the perceived consequences and interactional strategies in the given dimensional range (Strauss and Corbin, 1990:96). Selective coding involves analysing the code notes and comparisons of categories to come up with a story. A story is a descriptive narrative about the central phenomenon of the study (Strauss and Corbin, 1990:116).

The story is then conceptualized into a story line and the story line becomes the core category; that is, the central phenomenon around which all other categories are integrated (Strauss and Corbin, 1990:116).

Indeed, throughout the three steps to ensured theoretical sensitivity stated by Strauss and Corbin above were taken to give the study the desired rigour.

**Results from Open Coding**

**Concepts**

From the data gathered we came up with the following conceptual labels:

- Knowledge about ZOU
- Knowledge about ZOU’s Harare-Chitungwiza Region
- ODL as a mode of delivery
- Teaching and Learning at ZOU
- Teaching and Learning at ZOU’s Harare-Chitungwiza Region
Learner support at ZOU’s Harare-Chitungwiza Region
ZOU image
The image of ZOU’s Harare-Chitungwiza Region

Conceptual Properties:

Properties of concepts 1 and 2
Properties of this conceptual label were derived from ways either a prospective or existing student or alumni got to know about ZOU in general and ZOU’s Harare-Chitungwiza Region in particular:

- Print media
- Non-print media
- Other media
- ZOU website(s)
- Friends
- ZOU’s Harare-Chitungwiza Region Alumni
- Grape vine

Properties of concept 3
- Convenience
- Fashionable programs
- Ready modules
- reliability
- Accessibility
- Efficiency
- Affordability

Properties of concepts 4, 5 and 6
- Fees
- Degree programs
- Tutors
- Tutorial venues
- Tutorial contact hours
- Modules
- Assignments
- Library
- ICT
- Practical subjects
- Remediation
- Other student experiences at ZOU’s Harare-Chitungwiza region

Properties of concepts 7 and 8
- Identity
- Print media reports
- ZIMCHE
- Stereotype
- Marketing
- Internal systems
Categorising Properties

It may be noted that in the process of identifying properties we already categorised them under related conceptual labels.

Property Dimensionalizing

Dimensionalizing Knowledge about ZOU and Harare-Chitungwiza Region

- Print media – interest here was on several dimensions that came up from the data namely the print media ZOU popularly publishes its adverts as compared to others, frequency of adverts and types of adverts. The trends were that ZOU normally uses the Sunday Mail and calls to use other newspapers especially private newspapers. The use of the print media is not that frequent and ZOU usually uses the print media to advertise such events like conferences and start of semesters and almost rarely publishes names of students who would have been accepted. Respondents favoured putting up names of students who would have been given places to study with ZOU.

- Non-print media – whether or not ZOU uses non-print media like the radio and TV, types of programs and impact. ZOU rarely uses these types of media. Respondents favoured using radio and TV shows to boost ZOU image.

- Other media – ZOU uses other social media like face-book and twitter and officially does not use whatsapp. Its members of staff have phone allowance and frequently use sms and voice calls from their cell phones. Respondents commended communication through sms and voice calls especially as they are informed about registration, tutorials and examinations. An interesting dimension was that while this works well for existing students it remains almost private communication which does not help to make ZOU’s presence felt by the general public.

- ZOU website(s) – several dimensions were looked at including new versus returning visits, Browser and observer status, frequency and recency, engagement (time taken on the site) overview of devices used and location. The statistics are given in the attachments. Interesting properties include visits to the site that reach 48 000 and above with 13 670 viewers having visited the site during the period of study; broad range of viewers from countries like Zimbabwe (10 541), South Africa (643), Botswana (503), USA (418), Japan (219) and UK (196); Harare-Chitungwiza students who visited the site to check results and therefore had access to the questionnaire were about 1 100; engagement 7 172 had an engagement of 0-10 seconds and 364 (11-30 seconds), 572 (31-60 seconds) 1 433 (61-180 seconds) and 2 158 (181-600 seconds); browser and operating system data shows that 3 591 of the viewers used either desktops or laptops.

- Friends – The percentage of respondents who got to know ZOU was surprisingly significant, 31%, and therefore, it was inevitable to dimensionalize this property even though it was very difficult for lack of specificity. The study discovered that the respondents did not specify what type of friends these were but from some responses it would seem these were friends at work places and in our analysis we took work places as the context of this property. It was not even clear whether or not these friends were ZOU’s Harare region alumni because the property, former students, scoring a surprisingly low 4% and those that were not specific 8%. An interesting dimension in this regard was whether or not former students belonging to a
particular early period were advertising ZOU and why. Could be that the 31% are actually existing students?

- ZOU’s Harare-Chitungwiza Region Alumni – dimensions identified and studied in this regard include current employment whether Government, Private, NGO, self or not employed, challenges faced while studying with ZOU and therefore what they thought were possible push-away factors for existing and prospective students; major attractions and other experiences related to student enrolment.

- Grape vine – this property was considered because it featured in 3% of the responses and logically from this sudden appearance and very low score it was difficult to dimensionalize. However, the study considered it a very important property because what happens in the grape vine may build or destroy an institution. Important dimensions would be the specific circumstances and sources of the grape vine because these determine how juicy and therefore attractive the grape may be.

**Dimensionalizing Properties of concept 3**

- Convenience - the study looked at this property in terms of dimensions that also apply to accessibility, namely flexibility in terms of studying while the student earns and anywhere at any time, weekend tutorials and managing one’s own time in one’s home or work environment.

- Fashionable programs – when we got to analyse dimensions of this property focus shifted a bit to include on-the-job training in that most respondents studying with ZOU are furthering their education in areas where they are already employed and as such their studies become equivalent to on-the-job training or further sharpening of skills. The dimension that is strictly related to this property is the participation of already employed practitioners in module writing and content review thereby blending academic and professional experience in the modules making the programs fashionable.

- Ready modules-the study looked at what point modules are availed, their quality and their relationship with other properties like adequacy in addressing students’ challenges in assignments and examinations.

- Reliability-dimensions in this regard were analysed together with those that relate to efficiency and these included how well established is the mode of delivery in ensuring coverage of desired knowledge, the modules and tutorial contact hours.

- Accessibility-This has already been covered above.

- Efficiency-This has already been discussed above.

- Affordability-the fee structure as a dimension was considered elsewhere under a different conceptual label. Here the dimension considered included sponsoring self because one is already employed, the possibility to pay in self-determined staggered payment scheme, paying half the fees and getting modules and assignments as a result and finally, deferring and, or, postponing studies within a study period of 8 years and the related consequence of allowing students to study only when they can afford and finally, affordability relative to other responsibilities as family people.
Dimensionalizing Properties of concepts 4, 5 and 6

- Fees—whether or not they are high, comparison with other institutions of higher learning offering the same programs as ZOU, the availability or lack of terms of payment, direct deductions from one’s source of income, availability or lack of ZOU scholarships (full or part).

- Degree programs – quality, variety, relevance and, or market oriented, new and exciting, impartation of survival skills and fecundity to breed employers and not employees.

- Tutors – assistance from tutors, presence and punctuality at tutorials, depth of knowledge, allows and encouraging student participation, accessibility and professional handling of student queries.

- Tutorial venues – distance from town and general dimensions of accessibility, appropriateness, size of rooms and distance from shops.

- Tutorial contact hours – adequacy, frequency in terms of tutorial contact and how much must be covered.

- Assignments-relevance and relationship to modules, clarity in terms of task, marking, adequate, useful and fair comments, timeous return.

- Examinations-administration of exams, publication of time-tables, venues, invigilation, level of difficulty of examination questions, processing of results in terms of duration and publishing of results in terms of efficiency and accuracy.

- Library-distance from region and public transport picking and dropping zones, availability of up-to-date books and other relevant library (especially online) resources, assistance from librarians and opening times and days.

- ICT–assistance from lab technician, time to use the lab, distance from student’s place of employment or home and how this affects frequency of visits and engagement, availability of modern gadgets, breadth and depth in terms of coverage and variety of internet uses, bandwidth and speed of internet and variety of service providers.

- Remediation-availability of counsellors/academic advisors, quality of solutions offered, availability of trekking mechanisms for drop-outs (real or potential) and tracer studies for alumni and record of lessons learnt from them, mechanisms of according students opportunities to raise complaints.

- Other student experiences at ZOU’s Harare-Chitungwiza region—with this property, it was difficult to come up with specific dimensions because it was necessitated by responses that were not easily grouped under the conceptual category in question but all the same important to teaching and learning at ZOU’s Harare-Chitungwiza region. For example, a dimension concerning practical subjects came up from the data in terms of introduction and feasibility of teaching these in an ODL set-up, as well as rate of attraction and marketability. Judging from the peak of visits on the ZOU website, most visits were during the period when examination results had been published and so, students responded to our questionnaire that we published on the web while checking results. The consequence of this was that some dimensions came out of anger and, or, frustration with what they saw. During this period too at Harare-Chitungwiza region there was an unfortunate incident where student results were withheld subject to confirmation of payment and during the first two days long queues could be seen at accounts office.
Dimensionalizing Properties of concepts 7 and 8

- Identity-distinctive features of ZOU and ZOU’s Harare-Chitungwiza region, mission and goals, point of departure from other institutions of higher learning, unique programs.
- Print media reports-what print media has been and are saying about ZOU, effect on ZOU image, responses to media reports and impact.
- Zimbabwe Council of Higher Education (ZIMCHE) – This property was necessitated by the specific circumstances of suspended programs so the dimensions looked at were specifically the impact of the suspension, communication and interpretation of the suspension by stakeholders, ZOU reaction to the suspension and remedial action taken.
- Stereotype-this property is related to the above three properties and therefore dimensions identified under the above three properties were deemed applicable to it. However, a slightly different dimension was the long standing uninformed attitudes towards ZOU coming from people who just look at any unfamiliar thing to them with suspicion and their suspicion is spread until it generates stereotypical views about the unfamiliar thing; along these lines the study looked at treatment of stereotypical views or lack of it.
- Marketing-the dimension looked at was the availability of marketing strategy or the lack of it, to counter all the above, resources poured into marketing by the region and frequency of marketing tours.
- Internal systems-dimension like protocol and how it either promotes or impedes positive development, bureaucracy and how it frustrates students in their search for service at the region, efficiency on the part of processes and office bearers in service delivery.

Data Analysis Based on Axial Coding

At this stage of axial coding the data above were regrouped in new ways and categories and sub-categories were linked in a set of relationships denoting causality and a resultant phenomenon, the context of that causal relationship as well as intervening conditions, action and perceived consequences or interactional strategies to form a paradigm that allowed us to think through the data systematically.

The Central Idea Coming from the Data (Phenomenon)

From our axial coding we observed that all our data referred to student enrolment at Harare-Chitungwiza region. In our coding this became the phenomenon, which according to Strauss and Corbin (1990:100) is the central idea about which a set of actions/interactions is directed at managing. It was observed that student enrolment stood at a causal relationship with the following concepts and their related dimensions:

- Knowledge about ZOU; Knowledge about ZOU’s Harare-Chitungwiza Region
- ODL as a mode of delivery
- Teaching and Learning at ZOU; Teaching and Learning at ZOU’s Harare-Chitungwiza Region
- Learner support at ZOU’s Harare-Chitungwiza Region
- ZOU image at large and the image of ZOU’s Harare-Chitungwiza Region.
Context of the Phenomenon
The dimensions mentioned above were taken in their totality to represent the context of the identified phenomenon and context according to Strauss and Corbin (1990:101) refers to a specific set of properties that pertain to the phenomenon.

Intervening Conditions
These are part of the paradigm that denote broad and general conditions with a bearing on action taken or interactional strategies and these include time, space, marital status, economic status, career, gender, culture and history (Strauss and Corbin, 1990:103).

These we obtained from section A of our questionnaires. The data gathered from that section were analysed in the context of the paradigm formulated through axial coding to see what bearing specific properties in this section had on the phenomenon. For example, marital status gave us an indication of the challenges in time management on the part of the student.

Action/Interactional Strategies
It is precisely because of the goal of this stage of axial coding that we particularly chose grounded theory as our methodology. This study aims at coming up with appropriate action/interactional strategies directed at managing the phenomenon of student enrolment at ZOU’s Harare-Chitungwiza region. This stage and the following stage in the research are thus crucial because it is at these two stages that we begin this important exercise. For this reason we go through this stage in some depth.

This stage of the research was carried out in a bid to fulfil four properties about our phenomenon mentioned above. According to Strauss and Corbin (1990:104) action or interaction is processual and evolving in nature. By this they imply that it can be studied in sequences, movement or change over time. Second, it is purposeful. By being purposeful Strauss and Corbin mean action is done to fulfil an identified goal and the goal is either to respond in some way to, or to manage, a phenomenon. Therefore third, whenever action or interaction occurs, it does so through strategies and tactics.

CONSEQUENCES, CONCLUSION AND RECOMMENDATIONS

Following the paradigm discussed above of verifying statements against the data, the study arrived at the consequences that are forming the basis of our conclusion here. The study concluded that student enrolment at ZOU’s Harare-Chitungwiza Region stood at a causal relationship with knowledge about ZOU and about the Region, ODL as a mode of delivery, teaching and learning at ZOU’s Harare-Chitungwiza Region and ZOU image at large. Also, policy changes and co-ordination between administration and academic staff had a bearing on the student growth. Another factor that surfaced but could not be verified empirically as we could not interview authorities outside ZOU were the alleged negative use of ZIMCHE and the media by some members who were leaders of some universities competing with ZOU for public resources and students. However, the study showed that either way, improvement of ZOU internal structures discussed above would counter any negative manipulation of both ZIMCHE and the media. As such the study makes the following recommendations:
The Region needs to mobilize funds to advertise its programs in the state and private media including publishing names of students admitted for various programs.

The Region needs to come up with a specific strategy for alumni to advertise ZOU and the Region.

The website needs to be utilized broadly and deeply to include regular highlights of regional activities in the form of a bulletin; changes in policies and advantages of those changes to the students and any data regarding ODL.

The Region needs to double efforts to purchase a centre of its own to have control on tutorial venues, house own library and ICT onsite.

The Region needs to join arms with marketing to target even high school graduates and learn from the Malaysia Open University model of face-to-face interaction at regional centre in a bid to increase tutorial contact hours.

The region needs to come up with student-friendly fee payment plan including direct debit from student salaries and, or, bank accounts.

The region needs to align changes in the academic calendar from registry with tutorial dates and where there have been delays in registration both parties work out a plan to accommodate the delay.

More up-to-date books and library resources to this effect be purchased especially in programs that were introduced later.

The region needs to process results efficiently and timorously and produce transcripts as soon as students finish their degree programs and pass.

There is need to work on building our public image through efficiency in our systems and offering quality service. The region needs to encourage and cooperate with ongoing institutional efforts at seeking ISO certification and ZIMCHE performance standards from time to time.

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AN ANALYSIS ON DISTANCE EDUCATION COMPUTER PROGRAMMING STUDENTS’ ATTITUDES REGARDING PROGRAMMING AND THEIR SELF-EFFICACY FOR PROGRAMMING

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ABSTRACT

This study aims to analyze the attitudes of students studying computer programming through the distance education regarding programming, and their self-efficacy for programming and the relation between these two factors. The study is conducted with 104 students being thought with distance education in a university in the north region of Turkey in spring semester of 2013-2014 academic years. Attitude Scale toward Computer Programming (AStCP) and Computer Programming Self-Efficacy Inventory (CPSEI) are used as data collecting tool. The study is conducted within the descriptive scanning model. The data collected during the study is analyzed with Mann Whitney U test, independent t-test and Pearson Correlation coefficient for answering the research questions. According to the results of the study the attitudes of the students regarding programming are generally positive and their self-efficacy for programming are at high level. There is statistically important difference in the attitudes of students regarding programming in accordance with their gender and grade level. Accordingly, their self-efficacy differentiates statistically by these two variables. Finally, it is concluded that there is a positive relation in average level between the attitudes of the students regarding programming and their self-efficacy for programming.

Keywords: Attitudes Regarding Programming, Programming Self-Efficacy, Distance Education, Computer Programming.

INTRODUCTION

Computer programming is one of the most popular occupations in these days. There is Computer Programming Program under the Computer Technologies Department in the vocational high school of almost all the universities. These programs firstly have been founded as formal and evening education and they have continued their education and teaching activities. In recent years, in parallel with the developments in distance education technologies, distance education computer programming program has been opened in several universities and they still continue their activities. The main objective of computer programming programs is to prepare programmers having the technical knowledge and experience to be able to use information technologies and accommodate with the improving technologies. It is expected from the computer programming candidates to be graduated from this program to have computer programming skill at
Computer programming skill requires having some kind of thinking skill such as logical thinking and problem solving (Korkmaz, 2012; Lau & Yuen, 2009).

Computer programming is mostly perceived as a difficult course by the students (Aşkar & Davenport, 2009; Başer, 2013).

The fact that computer programming is perceived as a difficult course results in the fact that they develop mostly negative attitudes regarding programming (Başer, 2013). Negative attitude regarding programming has a negative effect on the success of students. Hence, the studies finding out that such factors as negative perception, motivation and especially low level of attitude can make negative effect on learning computer programming take the attention (Anastasiadou & Karakos, 2011; Hawi, 2010; Korkmaz & Altun, 2013).

It can be said that beside attitude, self-efficacy perception also plays a role in success of the students in computer programming course. Self-efficacy refers to the trust on the skill that the individual has in order to be able perform a work (Horzum & Çakir, 2009).

It is possible to encounter with the studies indicating the fact that it is highly possible that the student whose self-efficacy trust is lower will be unsuccessful in programming course (Altun & Mazman, 2012; Aşkar & Davenport, 2009). And the literature also includes information about there is a positive relation between attitude and self-efficacy (Demirtaş, Cömert, & Özer, 2011).

There are studies in very limited number in literature about the attitude regarding programming and programming self-efficacy trust. Hongwarittorn and Krairit (2010) reach the result that there is an important correlation between the attitudes regarding programming and the exam marks. There are generally studies concluding that the attitudes of students regarding programming are positive (Anastasiadou & Karakos, 2011; Başer, 2013; Korkmaz & Altun, 2013; Nurazian, Suzana, Haslızatu l, & Isamassabah, 2007). Furthermore, although there are studies concluding that the attitudes of male students are higher than the female students’ (Başer, 2013; Chang, Shieh, Liu, & Yu, 2012; Stoilescu, & Egodawatte, 2010), there are also studies finding out that there is no relation between the attitude regarding programming and gender (Lau & Yuen, 2009; McDowell, Werner, Bullock, & Fernald, 2003).

There are very limited studies about the self-efficacy perception for programming. According to Aşkar and Davenport (2009) self-efficacy perception for programming shows important differences by gender and departments, male and computer engineering students’ self-efficacy perception for programming are at higher level in comparison with other students.

According to Jegede (2009) the number of the courses taken in previous times and the year end mark gotten from these courses determine the self-efficacy for programming, but experience year for programming has no effect. Altun and Mazman (2012), find out that programming self-efficacy perception does not vary by gender; on the other hand it varies by the courses about programming and programming experience year.

Furthermore, literature also includes the studies concluding that the self-efficacy perception of the students for programming are at average level (Pereira, Zebende, & Moret, 2010; Hawi, 2010; Robins, Rountree, & Rountree, 2003).
It is seen that existing studies about the attitude regarding programming and self-efficacy density in engineering and computer education department. There are studies about student satisfaction of the students generally from the different departments, in specific students from computer programming who take education via distance education (Allen, Bourhis, Burrell, & Mabry, 2002; Ozyurt, 2014), and the attitudes of the students regarding their department and/or distance education (Lenka & Kant, 2012; Ojo & Olakulehin, 2006; Ozyurt, 2014; Ural, 2007) in literature. There is not any study searching the attitudes of the students studying at Distance Education Computer Programming Program regarding programming and their thrust on self-efficacy. However, in our day, many universities give the computer programming education through the distance education. In this context this study aims to inspect the attitudes of the computer programming candidates taking education through distance education regarding programming and their trust on programming self-sufficiency. It is thought that the study, by its content and scope, will fill an important gap in literature and make a contribution to computer programming education made through distance education.

METHODOLOGY

Aim and Research Questions
This study aims to search the attitudes of computer programming candidates taking education via distance education, their self-efficacy for programming and the relation between them. The research questions of the study can be listed as:

- What is the level of the attitudes of the distance education computer programming students regarding programming in general and on the basis of sub-factors?
  - Do the attitudes of these students regarding programming differentiate by gender both generally and on the basis of sub-factors?
  - Do the attitudes of these students regarding programming differentiate by class level both generally and on the basis of sub-factors?
- What is the level of the programming self-efficacy of the distance education computer programming students both generally and on the basis of sub-factors?
  - Does the programming self-efficacy of these students differentiate by gender both generally and on the basis of sub-factors?
  - Does the programming self-efficacy of these students differentiate by class level both generally and on the basis of sub-factors?
- Is there any relation between the attitudes of these students regarding programming and their programming self-efficacy?
  - Is there any relation between attitudes of these students regarding programming and their programming self-efficacy by gender?
  - Is there any relation between the attitudes of these students regarding programming and their programming self-efficacy by class level?

Sample
The Sample of this study consists of 104 students studying at Distance Education Computer Programming Program in vocational school of higher education in a university
in the north region of Turkey. The distribution of the participants by their gender is as male (n=87, f=83.7%) and female (n=17, f=16.3%), and their distribution by grade level is as 1. grade (n=49, f=47.1%) and 2. grade (n=55, f=52.9%). This study has been conducted in 2013-2014 academic year, spring semester.

**Data Collection Tool**

In this study, Attitude Scale toward Computer Programming (ASTCP) and Computer Programming Self-Efficacy Inventory (CPSEI) is used as data collection tool. ASTCP is designed by Başer (2013). ASTCP consists of 38 items and it is designed as 5-point Likert scale as to give answer to the choices such as "strongly disagree", "disagree", "undecided", "agree" and "strongly agree". Answers given to the each item by the students are listed as a numerical value as 1-5. ASTCP consists of four factors named as "F1: Self-confidence and motivation in programming", "F2: Benefit of programming", "F3: Attitude regarding success in programming", "F4: Social perception of success in programming". Validity and reliability examination of the scale is conducted by the researcher (Başer, 2013) and Cronbach-α reliability coefficient is found out as 0.953.

CPSEI is designed by Altun and Mazman (2012). CPSEI consists of 9 items and it is designed as 7-point Likert scale as to give answer to the choices such as "I never feel confident", "I do not feel confident generally", "I feel confident a little bit", "%50 %50", "I feel rather confident", "I feel confident generally", "I feel confident totally". Answers given to the each item by the students are listed as a numerical value as 1-7. CPSEI consists of 2 items named as "F1: Fulfilling basic programming tasks" and "F2: Fulfilling complex programming tasks". Validity and reliability examination of the scale is conducted by the researcher (Altun & Mazman, 2012) and Cronbach-α reliability coefficient is found out as 0.928.

**Data Analysis**

According to Yenilmez (2008) point intervals in 5-point Likert scales can be categorized as in order to increase the statistical comprehensibility as to give answer to the choices such as "strongly disagree (1.0-1.80)", "disagree (1.81-2.60)", "undecided (2.61-3.40)", "agree (3.41-4.20)" and "strongly agree (4.21-5.0)". In accordance with this statement, points intervals of ASTCP having 5-point Likert type are graded as "strongly disagree: 1.0-1.80"; "disagree: 1.81-2.60"; "undecided: 2.61-3.40"; "agree: 3.41-4.20" and "strongly agree: 4.21-5.0". Accordingly point intervals of CPSEI having 7-point Likert type are graded as "I never feel confident: 1.0-1.86"; "I do not feel confident generally: 1.87-2.72"; "I feel confident a little bit: 2.73-3.58"; "%50 %50: 3.59-4.44"; "I feel rather confident: 4.45-5.30"; "I generally feel confident: 5.31-6.16", and "I totally feel confident: 6.17-7.0".

The research has been conducted out with the descriptive scanning model. Attitudes of the distance education computer programming students regarding the programming and the level of their programming self-efficacy are determined by calculating the average point. Because of the fact that the distribution of the data do not show normal parameters according to the groups, whether attitude regarding the programming and the level of programming self-efficacy differentiate by gender is searched with Mann Whitney U-test one of the non-parametric tests.

Whether attitude regarding the programming and the level of programming self-efficacy differentiate by class level is searched with independent t-test one of the parametric tests for the data which range normally from group to group and the data which do not range normally from group to group is searched with Mann Whitney U-test which is one of the non-parametric tests. Finally, the relation between the attitude regarding programming
and programming self-efficacy is searched with Pearson Correlation coefficient. This calculation is repeated by taking into consideration the gender and class level. If the correlation coefficient is 1.00, this refers to perfect positive relation, if it is -1.00 on the other hand; this refers to perfect negative relation. If the correlation coefficient is between 0.70-1.00 as an absolute value it refers a relation at high level, if it is between 0.70-0.30 this refers average relation and if it is between 0.30-0.00, this refers a relation at low level (Büyüköztürk, 2007). The data have been analyzed with SPSS 16.0 pocket program.

**FINDINGS**

Findings obtained from the study are presented in accordance with the research questions.

**Findings about the Attitudes of the Distance Education Computer Programming Students Regarding Programming**

The average of the point that the distance education computer programming students get from the AStCP is 3.81. This average point is seen in the interval of “Agree”. Relying on this the attitudes of students regarding the programming can be evaluated as positive. Table 1 shows the result of Mann Whitney U-test showing whether the points of the students’ attitudes regarding the programming differentiate or not by gender both generally and on the basis of sub-factors.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>17</td>
<td>34.65</td>
<td>589</td>
<td>436</td>
<td>.007</td>
</tr>
<tr>
<td>Male</td>
<td>87</td>
<td>55.99</td>
<td>4871</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
<td>52.15</td>
<td>886.5</td>
<td>554.5</td>
<td>.103</td>
</tr>
<tr>
<td>Male</td>
<td>87</td>
<td>52.57</td>
<td>4573.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
<td>38.79</td>
<td>659.5</td>
<td>733.5</td>
<td>.958</td>
</tr>
<tr>
<td>Male</td>
<td>87</td>
<td>55.18</td>
<td>4800.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
<td>44.94</td>
<td>764</td>
<td>506.5</td>
<td>.040</td>
</tr>
<tr>
<td>Male</td>
<td>87</td>
<td>53.98</td>
<td>4696</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
<td>37.88</td>
<td>644</td>
<td>611</td>
<td>.250</td>
</tr>
<tr>
<td>Male</td>
<td>87</td>
<td>55.36</td>
<td>4816</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When the Table: 1 is analyzed, it is seen that the attitude regarding the programming show differences by gender statistically (U=436, p<0.05).

When the grade averages of the groups are taken into consideration, it is seen that male students have higher attitude regarding the programming than female students. When it is analyzed on the basis of sub-factors, there is not any statistical difference at the first, second and fourth factors, on the other hand, at the third factor (F3: Social perception of success in programming) it is seen that there is a statistical difference in the favor of male students (U=764, p<0.05). Findings about whether the attitudes of the students
regarding the programming differentiate statistically by grade level are presented in Table: 2.

Table: 2
The result of independent t-test showing whether the attitudes of the distance education computer programming students regarding the programming differentiate statistically by grade level

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>$\bar{x}$</th>
<th>Sd</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>49</td>
<td>3.73</td>
<td>0.437</td>
<td>102</td>
<td>2.093</td>
<td>.039</td>
</tr>
<tr>
<td>Grade 2</td>
<td>55</td>
<td>3.88</td>
<td>0.306</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When the Table 2 is analyzed, it is seen that, attitudes of the students regarding the programming differentiate statistically by grade level [t (102) =2.093, p<.05]. The attitudes ($\bar{x}$=3.88) of the students in second grade level regarding the programming are more positive than the ones in first grade level ($\bar{x}$=3.73). The results of Mann Whitney U-test and Independent t-test showing that whether the attitudes of the distance education computer programming students regarding the programming differentiate by grade level on the basis of sub-factors are given in Table 3 and 4.

Table: 3
Mann Whitney U-test showing that whether attitudes of the distance education computer programming students regarding the programming differentiate by grade level on the basis of first sub-factor.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>Grade 1</td>
<td>49</td>
<td>42.02</td>
<td>2059</td>
<td>834</td>
</tr>
<tr>
<td>Grade 2</td>
<td>55</td>
<td>61.84</td>
<td>3401</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

p<.05

Table: 4
The result of independent t-test showing that whether attitudes of the distance education computer programming students regarding the programming differentiate by grade level on the basis of second, third and fourth sub-factor.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>$\bar{x}$</th>
<th>Sd</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 2</td>
<td>Grade 1</td>
<td>49</td>
<td>3.679</td>
<td>.432</td>
<td>102</td>
<td>0.436</td>
</tr>
<tr>
<td>Grade 2</td>
<td>55</td>
<td>3.645</td>
<td>.366</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td>Grade 1</td>
<td>49</td>
<td>3.964</td>
<td>.776</td>
<td>102</td>
<td>0.096</td>
</tr>
<tr>
<td>Grade 2</td>
<td>55</td>
<td>3.977</td>
<td>.602</td>
<td></td>
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</tr>
<tr>
<td>Factor 4</td>
<td>Grade 1</td>
<td>49</td>
<td>4.183</td>
<td>.670</td>
<td>102</td>
<td>1.319</td>
</tr>
<tr>
<td>Grade 2</td>
<td>55</td>
<td>3.987</td>
<td>.823</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

p<.05

When the Table 3 and Table 4 are interpreted, it is seen that in the first factor “F1: Self-confidence and motivation in programming”, there is an important statistical difference in the favor of the students in second grade (U=834, p<.05), however there is not any important statistical difference by grade level in other factors [t(102)=0.436, p>.05, t(102)=0.096, p>.05, t(102)=1.319, p>.05].
Findings about the Programming Self-Efficacy of the Distance Education Computer Programming Students

The average of the point that distance education computer programming students get in CPSEI is 5.0. This average point is seen in the interval of" I feel rather confident". According to this finding, the programming self-efficacy of the students can be regarded as positive/high. In Table 5, the result of Mann Whitney U-test showing whether the programming of self-efficacy of the students differentiate by gender both generally and on the basis of sub factors is given.

**Table: 5**
The result of Mann Whitney U-test showing whether the programming self-efficacy of the distance education computer programming students differentiate by gender

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>U</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
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<td>17</td>
<td>37.88</td>
<td>644</td>
<td>491</td>
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</tr>
<tr>
<td>Male</td>
<td>87</td>
<td>55.36</td>
<td>4816</td>
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<td>Factor 1</td>
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<tr>
<td>Female</td>
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<td>38.76</td>
<td>659</td>
<td>506</td>
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<td>55.18</td>
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</tr>
<tr>
<td>Factor 2</td>
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<td></td>
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<tr>
<td>Female</td>
<td>17</td>
<td>43.21</td>
<td>734.5</td>
<td>581.5</td>
<td>.163</td>
</tr>
<tr>
<td>Male</td>
<td>87</td>
<td>54.32</td>
<td>4725.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

p<.05

When the Table 5 is analyzed, it is seen that programming self-efficacy statistically differentiate by gender (U=491, p<0.05). When the grade average is taken into consideration, it is seen that the programming self-efficacy of the male students are higher that the female students. In terms of sub factors, it is seen that male students have higher self-efficacy than female students for "Factor 1: Basic programming task" (U=506, p<0.05). The findings about whether programming self-efficacy of the students differentiate statistically by grade level are given in Table 6.

**Table: 6**
The result of independent t-test showing whether the programming self-efficacy of the distance education computer programming students differentiate by grade level

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>$\bar{X}$</th>
<th>Sd</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>49</td>
<td>4.24</td>
<td>1.30433</td>
<td>102</td>
<td>5.662</td>
<td>.000</td>
</tr>
<tr>
<td>Grade 2</td>
<td>55</td>
<td>5.68</td>
<td>1.28225</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 1</td>
<td>49</td>
<td>4.7143</td>
<td>1.52297</td>
<td>102</td>
<td>0.096</td>
<td>.000</td>
</tr>
<tr>
<td>Grade 2</td>
<td>55</td>
<td>6.3212</td>
<td>1.33790</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 1</td>
<td>49</td>
<td>4.0136</td>
<td>1.52671</td>
<td>102</td>
<td>2.039</td>
<td>.000</td>
</tr>
<tr>
<td>Grade 2</td>
<td>55</td>
<td>5.3667</td>
<td>1.40999</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

p<.05

According to the findings in Table 6, programming self-efficacy of the students do not differentiate statistically by grade level [t(102)=5.662, p<.05]. When the average points are taken into consideration, it is seen that the self-efficacy of the 2nd grade students ($\bar{X}$=5.68) are higher than 1st grade students ($\bar{X}$=4.24). On the basis of sub-factors, when both factors are interpreted by grade level, a statistically important difference is seen in the favor of 2nd grade students [t (102) =0.096, p<.05, t (102) =2.039, p<.05].
Findings about the Relation between the Attitudes of the Distance Education Computer Programming Students Regarding the Programming and Their Self-Efficacy Level

It is concluded that, there is a positive, important and moderate relation between the attitudes of the distance education computer programming students regarding the programming and their self-efficacy level \(r=0.516, p<.01\). The findings show that there is an important relation between the attitudes of the students regarding the programming and their self-efficacy level by gender and grade level. While there is a strong and important relation between the attitudes of female students regarding the programming and their self-efficacy \(r=0.845, p<.01\), it is seen that this relation is positive and moderate among the male students \(r=0.464, p<.01\). Furthermore, there is an important positive and moderate relation between the attitudes of the 1st and 2nd grade students regarding the programming and their programming self-efficacy \(r=0.647, p<.01; r=0.300, p<0.01\) respectively.

CONCLUSIONS and DISCUSSIONS

This study deals with the attitudes of the students studying computer programming through distance education regarding programming and their programming self-efficacy and the relation between them and the results are analyzed and discussed. According to the results obtained from the study, the attitudes of the distance education computer programming students regarding programming are generally positive. The attitudes of the students regarding programming differentiate by gender statistically in favor of male students. When the results are analyzed on the basis of sub factors, it is seen that while there is an important difference in the factor "Social perception of success in programming" in favor of male students, there is not any important difference in other three factors by gender. When the influence of grade level on the attitude regarding programming is searched, it is concluded that there is a statistically important difference in the favor of 2nd grade students.

In terms of sub-factors, while there is a statistically important difference in "Self-confident and motivation in programming" factor in favor of 2nd grade students, in other three factors, there is not any important difference by grade level. The results of this study have parallels with studies in the literature which reach the result that the attitudes of students regarding programming are positive Anastasiadou & Karakos, 2011; Başer, 2013; Korkmaz & Altun, 2013; Nurazian, et al., 2007).

Additionally, beside the studies concluding that gender has no influence on the attitude regarding programming (Lau & Yuen, 2009; McDowell, et al., 2003), there are also studies concluding that male students have more positive attitude regarding programming than female students (Başer, 2013; Chang, et al., 2012; Stoilescu, & Egodawatte, 2010). The result of this study supports the studies concluding that gender affects the attitude regarding programming.

According to the results about self-efficacy, it is seen that the computer programming self-efficacy of the students are generally high. It is concluded that programming self-efficacy of the students have statistically important differences in accordance with gender and grade level similar to their attitude points. Hence, in terms of gender, there is important difference in programming self-efficacy of the students in the favor of male students. On the basis of sub-factors, there is a difference in “basic programming tasks” factor in favor of male students, but there is not any important difference in other factors by gender. In terms of the influence of grade level on programming self-efficacy, it is seen that there is a statistically important difference in favor of 2nd grade students both
generally and on the basis of sub-factors. Programming self-efficacy of the students is at average level in many studies in the literature (Pereira, et al., 2010; Hawi, 2010; Robins, et al., 2003); however, it is at high level in this study. The result of the study differs from the literature with this point. The fact that students chose computer programming as an occupation may have an active role in the result that their self-efficacy is high. Beside the studies trying to reach the result that gender has no influence on programming self-efficacy (Altun & Mazman, 2012), there are also studies concluding that gender has an influence on self-efficacy (Aşkar & Davenport, 2009) in literature. The results of the study support the study of Aşkar and Davenport (2009) on that sense. The fact that programming self-efficacy varies by grade level supports the result that number of the courses taken about programming and the year of experience in programming affect the self-efficacy which is included in literature (Aşkar & Davenport 2009; Jegede, 2009).

Finally, it is concluded that there is a statistically important relation in a positive direction and at average level between the attitudes of the students regarding programming and their programming self-efficacy. If the relation between the attitude regarding the programming and programming self-efficacy is analyzed in terms of gender, while this relation is positive and strong for the female students, it is positive and at average strength for the male students. In terms of grade level, it is concluded that this relation is positive and at average strength for 1st and 2nd grade students. The results obtained from the study, become more comprehensible when the attitude regarding programming and programming self-efficacy are considered together. Hence, both the attitude regarding programming and programming self-efficacy varies statistically by gender and class level. This differentiation is at the same direction for both variables. The fact that there is a relation in positive direction and average level between the attitude and self-efficacy makes these results meaningful. Thus, the attitude of an individual whose self-efficacy is high is also expected to be high, and similarly, the self-efficacy of an individual whose attitude is high is expected to be high.

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CAVL:
Does it develop learner’s attitude?

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ABSTRACT

Individual’s response to anything related to the immediate context can form attitudes concerning the learning situation where the language is taught. As an attempt to shed new light on the issues relevant to attitude, this study investigated the extent to which a Computer-Assisted Vocabulary Learning (CAVL), Mandegar, can improve learners’ perceptions about the program. To fulfill the aim, eighty first-grade high school learners, divided as control and experimental groups, were randomly selected. Two questionnaires, in the first and last session adopted from Altiner (2011) and Bulut & Farhan (2007) respectively, were administered to the participants to investigate their perception to use CAVL in the future. The results, obtained using Paired Samples T-Test (p=0.002 < .05), revealed a significant difference between CAVL users and nonusers in favor of the experimental group. Students in the experimental group showed a positive attitude toward CAVL and perceived its utility for helping them speed up vocabulary learning. The present finding might have important implications for decision makers and teachers to further involve Computer-Assisted based programs to increase Language learning.

Keywords: Attitude, Computer-Assisted Vocabulary Learning, CAVL, perception, vocabulary learning.

INTRODUCTION

According to Barani (2013), CALL was first identified and presented on university mainframe computers in the 1960s. A crucial characteristic in the early development of CALL, namely the Plato project, was started at the university of Illinois in 1960s (Marty, 1981). In America, the computer-based introductory courses were taken by students at schools, which were referred to as 'computer-assisted instruction' (CAI) (Levy, 1997). This caused the programmers to make more books on CALL in the early 1980s, the period that has witnessed utilizing the computers by learners and teachers both in educational instructions and by people at homes. Computers have been used for language learning and teaching for almost more than three decades (Levy, 1997). Hubbard (2009) offered a compilation of 74 key articles and book excerpts which were published during the years 1988-2007 and provided all around overview of main ideas and research ideas that influenced the development of CALL.
THE HISTORY OF CALL

The history of CALL, according to Warschauer and Healey (1998), can be divided into three main stages: behavioristic CALL, communicative CALL, and integrative CALL. Each stage is related to a certain pedagogical approach.

Behavioristic CALL
According to Warschauer and Healey (1998), computer at this stage was seen as a mechanical tutor teaching which never let learners work at their own pace, and which hindered motivation.

Communicative CALL
The softwares which were brought forth in this period consisted of text reconstruction programs and simulations; the focus was on what students did with each other while working at the computer rather than on what they did with the computer.

Interactive (Integrative) CALL
At this stage, with the advent of new focus on authentic social contexts, students would be capable of using various technological tools as an ongoing process of language learning and use, instead of visiting computer lab once a week for isolated exercises.

According to Lee (2000), CALL incorporates a large number of approaches to foreign language teaching and learning, from the traditional approaches in 1960s and 1970s with drill and practice programs to more recent versions of CALL such as virtual learning environment and web-based distance learning. Interactive whiteboards, computer-mediated communication (CMC), language learning in virtual worlds and mobile-assisted language learning (MALL) are the most recent extensions of CALL.

Advantages of CALL Programs
According to Gunduz (2005), one of the most useful merits of CALL is that software venders and language teachers are independent of grammar practice as the basic goal of computer use in the language classroom. The vocabulary programs have been textualized and they might have embraced graphics, sound and video. The error checking can provide aid for learners in the response they get, and direct them to exercise more or guide them to the following stage. Abraham(2007) has indicated that teaching softwares allow students to check the meaning of unknown words right away by accessing the resources which are designed to increase comprehesion. According to Lu (2010), students in CALL environment are provided with easy access to learning environments regardless of place and time, and have more motivation.

Writing process is another field in which computers are of great advantage. Some writing softwares help students in the pre-writing stage to create and outline ideas, and most word processors have spell checkers to help weak spellers be aware of their mistakes and recognize the correct spelling from a list of options (Gunduz, 2005). Higgins (1995) notes that CALL is influenced pronunciation too. Most of the pronunciation programs now let students compare their recordings with a model by providing them with responsibilities for voice recording and playing back. Most drills now include games which is the entertaining factor to motivate language teaming.

Other preferences of CALL, according to Warschauer & Healey (1998), are as the followings:
multimodal practice with feedback,
individualization in a large class,
prior or small group work on projects,
fun factor,
variety in the resources available and learning styles used,
exploratory learning with large amounts of language data, and
real-life skill-building in computer use.

Computers act as a tutor; they assess the learner's reply, record it, point out mistakes and give explanations about them, and guide the students to find the correct answer. They offer interactive learning. According to Gunduz (2005), computers can repeat an activity without any of the learners' errors which arise by repetition. They can interact with and deliver feedback to the students. It also can accommodate different speeds of learning, as Gunduz noted in her article.

What are the roles of teachers and students when studying English with the help of computer applications or Internet? Although the Internet is considered as a useful source in language learning, the teachers' preparation to incorporate computers into the classroom is dominant for the achievement of methodological and pedagogical goals, and that is why teachers should be trained for it. As Davies (2002) stated, "a growing disparity between technology and effective classroom implementation can be noticed" (p. 5). Teachers should clearly figure out curricula objectives which are going to be gained and procedures which are used during lessons. Davis (2002) adds that e-learning increases students' motivation and eagerness; empowers teaching and learning and gives a learner the responsibility to reach out for native-speaking content.

Disadvantages of CALL programs
Gips, Dimattia & Gips (2004) claimed that computers would increase educational expense and decrease the impartiality of education which eventually lead to be a great burden for parents and schools.

The second disadvantage is the necessity of having basic knowledge about computer for language learning for both students and teachers. As a result, those students who do not have adequate technological training will not adore the positive points of computer technology (Roblyer, 2003).

Imperfection of computer assisted language learning programs is the third drawback. Reading, listening and writing are skills that current computers mainly deal with them. Although some speaking programs recently have been developed, their functions are still narrow. Warschauer (2004) indicates that a program should be able to understand spoken input for evaluation of its correctness and appropriateness. Programs should have capability of diagnosing student's pronunciation, syntax, or usage problems.

Fourth, Computers cannot respond to student's questions as quickly as teachers do due to limitations in artificial intelligence of computers. Humans and computers use information in different ways and this is why computers are unable to interact effectively (Dent, 2001). Blin (1994) claims that current computer technology and its programs are not well equipped with enough intelligence to be thoroughly interactive.

Attitude
Gardner and Lambert (1972) believes that attitudes toward the learning situation are concerned with the individual’s reaction to anything relevant to the immediate context.
where the language is taught. They added that these attitudes, regarded as socioeducational model, are considered relative to others in the class.

Gardner and Smythe (1981) maintained that the nature of a specific language class might bring different attitudes. Attitudes toward leaning situation can be evaluated via evaluation of the teaching environment and classmates. But two scales in the AMTB, Evaluation of the Course and Evaluation of the Teacher, can reveal much of the crucial variation in learners’ attitudes (Masgoret & Gardner, 2003).

Attitude and Language Learning
Participants’ motivation can regulate the attitude of leaning tasks (Oxford & Shearin, 1994). This attitude can be also determined by the speakers of the language or the context where the language is spoken (Holmes, 1992). Additionally, stress and anxiety originating from learning contexts may lead to learners’ positive or negative attitudes (Johnson & Johnson, 1998). The type of the task is also an influential factor in forming learners’ attitudes (Sarason & Sarason, 1990). He pointed out that the students attending school or university exams would show lower motivation as compared with the students who learn the material without any assessment and test at the end of the curriculum. Vallerand and Reid (1984) believed that motivation can be strengthened in case of positive feedback they may receive from their performance.

RESEARCH QUESTION
The high school students’ difficulties and the resulting challenges for teachers inspired the researcher to involve students in learning the vocabulary via CAVL program in order to study the effectiveness of this language teaching software in developing the perceptions of learners. In other words:

Q1: What are the high school-level students’ attitudes about learning academic vocabulary with Mandegar (a computer-based learning program)?

METHOD
Participants
The participants, 80 first-grade high school students, were learning English as one of their courses at high school in Iran. They were all males, about fifteen years of age and had studied English as a compulsory high school course for the preceding three years. Two classes were randomly assigned as the experimental group and two classes as the control one. Their course book, based upon Grammar Translation Method, was the same. The experimental group learned and practiced new words through using spaced repetition computer software; the control group learned vocabularies via traditional teaching techniques, i.e. using synonyms, exemplifications and vocabulary drills. Both groups studied the vocabulary items of the same textbook under none-native teacher’s supervision.

Instructional Software and Materials
The vocabulary learning computer software based on spaced repletion learning, a spaced repetition software, Mandegar leitner box (a software revised in Iran), was used for the experimental group to help learners foster the high school textbook vocabularies. According to Dr. Sida (2014), the creator of Mandegar, it is a program which facilitates remembering of vocabulary items. He believes that the technique is much more efficient than the traditional one to increase the amount of vocabulary and decrease the time that they generally spend for studying to remember vocabulary items ("Leitner Box", 2013).
The function of the software is based on a flashcard system with the question on the front and the answer on the back of the card. However, the appearance of Mandegar does not look like the paper flashcards. When we click on Show Answer button, the question part is also seen by default (See Figure 1).

![Screen Shot of the Mandegar (Recognition Card)](image)

Figure: 1
Screen Shot of the Mandegar (Recognition Card)

It is possible to create two styles of flashcards in different groups that are recognition cards and recalling cards. In the recognition card format, learners are given some contextualized vocabulary and are asked if they can understand it. However, the disadvantage of this card system is that words cannot be incorporated into active vocabulary of learners so that learners can easily recognize the words (See Figure: 1).

For recalling cards, learners are expected to produce an answer in the target language. In this technique, the translation of the vocabulary in the learner’s native language will be presented first and the learner is required to find the correct word in the target language. In recalling technique, the definition of the vocabulary as well as an example is given to students on the front part. The definitions, meanings and example sentences were all taken from Oxford Advanced Genie and Lingvosoft Dictionary softwares. The examples were selected according to their comprehensibility for the students at this level.

After showing questions to the learners, they are required to concentrate on finding the answer in order to recall the correct answer. When the learner is ready, "Show Answer" option should be clicked and the following options on the flashcard will be displayed (See Figure: 2).
Subsequently, learners choose an option based on how they remember the target item; push either true answer or false answer bottoms. Every time the learner remembers a word correctly, they will be shown the same word again after a longer period of time and if the learner cannot remember it correctly, the word will be carried over to the first stage for relearning. Audio pronunciation of new word is available in the software and the written form of it can also be added to the flashcard to present the appropriate pronunciation of the vocabulary item.

In the control group, the same textbook vocabularies were taught through synonyms, exemplifications and practicing vocabulary.

Questionnaire. In the first and the last sessions, in order to probe the learners’ perspectives on CAVL and to see whether they were satisfied with the teaching technique or not, two questionnaires were administered. The purpose of the questionnaires was to discover two types of information about the participants in the computer group.

The first section of the questionnaire, run in the first session, focused on the participants’ personal information based on nine Likert-scale items (1=strongly disagree, 2=disagree, 3=not sure, 4=agree, 5=strongly agree) to measure learners` ability in using computer or the internet, their comments about vocabulary learning and the role of the technology in this process (See Appendix B).

The second section of the questionnaire was used to determine participants'reworks, attitudes and feelings about the CAVL again through 10 Likert-scale items (see Appendix C).

This test was administered in the last session. Both sections of the questionnaire were adopted from Altiner (2011) and Bulut & Farhan (2007) respectively. Kudar-Richardson
Reliability Coefficient (KR 21 Formula) has been used to measure the reliability of the tests which were 0.83 and 0.82 respectively.

**Procedure and Data Analysis**

In this study, all of the students took part in their usual classes because of the educational regulations. It is worth mentioning that homogeneity of students was ensured, according to students’ scores in the preceding term. The number of participants was 80; they were randomly assigned to four groups consisting of 20 students, i.e. two experimental and two control groups marked as groups 1 and 2.

The students in group 1 were treated using spaced repetition computer software (Mandegar software). In the learning phase, the participants learned their course vocabularies making use of Mandegar software every day for 8 weeks. The classes were held two sessions a week, each session one hour and a half in the computer room of school; 10 new words were introduced to the learners every session. Yet, they had the option to choose the number of cards they wanted to review each session. For this study, learners were told to review at least 10 words a session, but they had the chance to increase this number according to their own pace. Mandegar is based on the spaced repetition learning system, which aims at helping learners to review target words for a short period of time every day.

In the case they were not able to do it in a single session, they could leave new cards blank and when they open it for the next time, the software will prevent any new cards from being shown. In way, learners will not have too many new items to review a day.

Students could have access to computers every day. They were told that Mandegar could be installed on laptops as well as on desktop computers. Hence, they could bring and use their laptops in class. A detailed presentation was given to students about how software works. The students in control group received ordinary classroom instructions each session. In order to teach the new vocabularies, the learners were asked to close their books and then the following steps were taken. The first step consisted of reading aloud each vocabulary item two or three times then a short pause was made so that the students could learn the correct pronunciation.

The second step included reading out each vocabulary two or three times again, and allowing the students to repeat the words. In the third step the students were requested to open their books to the intended page and only listen to the teacher as the vocabulary items were read out to them. The last step consisted of going through the word list and explaining each word by presenting examples and writing the synonyms and antonyms on the board.

**RESULT**

**Descriptive statistics**

The first one related to the learners` ability to use computer or Internet, their attitudes about vocabulary learning and the role of the technology in this process and the next one was used to determine participants' thoughts, attitudes and feelings about the CAVL.

The students were asked to circle the intended item according to the level of agreement (i.e. 1-Strongly Disagree; 2-Disagree; 3-Neutral; 4-Agree, 5-Strongly Agree). The percentage for each item was calculated as seen in table 1 and table 2.
As evident from table 1, most students feel comfortable in using computers and internet while 60 percent of students do not use online resources to improve their English.

42 percent like to study vocabulary independently. Results shows that 37 percent of students agree that vocabulary play an important role in learning language but they do not know how to improve their vocabulary knowledge and consequently they do not enjoy learning vocabulary.

Fifty percent of students do not have any opinion about the statement of using computer and the Internet to help them improve their English vocabulary.
<table>
<thead>
<tr>
<th>NO</th>
<th>Statement</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>After taking CAVL courses, I know how to benefit from my PC to improve my English vocabulary.</td>
<td>2.5</td>
<td>10.0</td>
<td>-</td>
<td>60.0</td>
<td>27.5</td>
</tr>
<tr>
<td>2</td>
<td>CAVL is a stress-free environment to learn English.</td>
<td>-</td>
<td>2.5</td>
<td>2.5</td>
<td>7.5</td>
<td>87.5</td>
</tr>
<tr>
<td>3</td>
<td>CAVL is a more casual way of learning.</td>
<td>72.5</td>
<td>15.0</td>
<td>5.0</td>
<td>7.5</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>I know more about how to use computers after having taken CAVL courses.</td>
<td>20.0</td>
<td>50.0</td>
<td>5.0</td>
<td>17.5</td>
<td>7.5</td>
</tr>
<tr>
<td>5</td>
<td>It takes less time to learn vocabulary during CAVL classes.</td>
<td>5.0</td>
<td>20.0</td>
<td>32.5</td>
<td>25.0</td>
<td>17.5</td>
</tr>
<tr>
<td>6</td>
<td>I do not have technical problems in using computers during CAVL classes.</td>
<td>7.5</td>
<td>25.0</td>
<td>2.5</td>
<td>60.0</td>
<td>5.0</td>
</tr>
<tr>
<td>7</td>
<td>I prefer CAVL to traditional classrooms for Learning vocabulary</td>
<td>12.5</td>
<td>22.5</td>
<td>-</td>
<td>47.5</td>
<td>17.5</td>
</tr>
<tr>
<td>8</td>
<td>I prefer to read and learn vocabulary via computers.</td>
<td>10.0</td>
<td>25.0</td>
<td>2.5</td>
<td>45.0</td>
<td>17.5</td>
</tr>
<tr>
<td>9</td>
<td>Learning vocabulary via computers is more interesting and useful when supported with more information such as pronunciation of vocabulary.</td>
<td>7.5</td>
<td>12.5</td>
<td>10.0</td>
<td>52.5</td>
<td>17.5</td>
</tr>
<tr>
<td>10</td>
<td>Computers help me self-correct my spelling and pronunciation.</td>
<td>5.0</td>
<td>12.5</td>
<td>2.5</td>
<td>32.5</td>
<td>47.5</td>
</tr>
</tbody>
</table>

Table: 2 presents the results of the questionnaire administered after the treatment. As seen in this table, sixty percent of students know how to benefit from computer to improve their English vocabulary.

The students agreed that they feel comfortable in CAVL environment to learn English and it takes less time to learn vocabulary through computer. Sixty percent of them did not have technical problems in using computers and about 47 percent of students preferred CAVL strategy to traditional methods and wanted to read and learn vocabulary via computers.

Learning vocabulary via computers was more interesting and useful for about 52 percent of students when supported with more information such as pronunciation of vocabulary. About 47 percent of learners strongly agreed that CAVL strategy can help them self-correct their spelling and pronunciations.

In order to find out whether student's overall attitudes toward CAVL is positive or not, a paired samples T-test was conducted. Table3 and 4 display the results.
Table: 3
Descriptive Statistics for Paired Samples T-Test Comparing Two Questionnaires before and after the Treatment

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 First Q</td>
<td>2.9250</td>
<td>40</td>
<td>.31163</td>
<td>.04927</td>
</tr>
<tr>
<td>Second Q</td>
<td>3.3650</td>
<td>40</td>
<td>.82913</td>
<td>.13110</td>
</tr>
</tbody>
</table>

The results indicated that the overall mean of the 40 respondents before and after treatment were (2.92) and (3.36) respectively. It shows that the student’s attitudes have changed toward using computers in learning vocabulary. Table 4 shows the paired samples test outcomes.

Table: 4
Paired Samples T-Test Comparing Two Questionnaires before and after the Treatment

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% CI</th>
<th>95% CI</th>
<th>t</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>.44000</td>
<td>.83218</td>
<td>.13158</td>
<td>.70614</td>
<td>.17386</td>
<td>3.344</td>
<td>39</td>
<td>.002</td>
</tr>
</tbody>
</table>

Table: 4 shows that the sig. value of test is (p=0.002<0.05), revealing that the students’ overall attitude toward CAVL strategy is positive.

**DISCUSSION**

Regarding the research question, students’ attitudes toward using computer in learning vocabulary elicited from two questionnaires, the study has come to an answer that students in general have developed a positive attitude toward using CAVL method. The results would seem to indicate that learners` negative perceptions about vocabulary learning might improve by adopting new strategies, such as technology integration into learning and teaching. The findings support many researchers’ claims in terms of the learners’ perception after using a computer-based program for increasing the speed and amount of vocabulary. The results of current study are compatible with those achieved by Altiner (2011). Having examined the effectiveness of computer based flash card program on academic vocabulary learning and the perception of college-level ESL students, Altiner reported that the negative perceptions of learners change. He added that learners’ attitude toward using this software was positive and they found it useful, usable and enjoyable.

This result is also endorsed by other researchers who have shown that students prefer to use different technologies and technology use can generate positive attitudes in learners (Oblinger, 2005). Moreover, other surveys revealed that computer-based flashcard
programs to a great extent can enhance learners’ motivation by including various multimedia possibilities (Allum, 2004; Hulstijn, 2001; Nakata, 2011).

CONCLUSION

The prime goal of the current study was to investigate learning vocabulary via computer assisted vocabulary learning software by EFL high school students in Iran and its contribution to learners’ perception. In order to find the answer to the posed question, this study was conducted with 80 first grade high school students. They were assigned in to two experimental and control groups. The students of the experimental group were treated by using spaced repetition computer software (Mandegar software). The students in the control group however, received ordinary classroom instruction in each session. The result appeared to manifest that learners’ perception improve by incorporating computerized devices.

SUGGESTIONS FOR FURTHER RESEARCH

The previous section highlighted the fact that there exist the possibilities of exploring the study in variously different ways so that considering this fact, the improvements and outcomes may be far better. This research was carried out on first grade high school students. Students at different age range and language proficiency levels can be subject to see whether CAVL has different effects on them. The same experiment with female students would be necessary to support the findings of this study. Other settings, exclusive of public school, could be selected and used such as language institutes, universities, and the like. Future research may examine computerized instruction on different language skills such as reading and writing.

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REFERENCES


APPENDIX A

Questionnaire One

For the questions 1-9, indicate your answer by circling the appropriate number to match your opinion.

| Name: .......................... Class: .......................... For the questions 1-9, indicate your answer by circling the appropriate number to match your opinion |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 1. I feel comfortable using computers. | **Strongly disagree** | **Disagree** | **No opinion** | **Agree** | **Strongly Agree** |
| 2. I feel comfortable using the Internet. | **Strongly disagree** | **Disagree** | **No opinion** | **Agree** | **Strongly Agree** |
| 3. I often use online resources to improve my English. | **Strongly disagree** | **Disagree** | **No opinion** | **Agree** | **Strongly Agree** |
| 4. I feel comfortable studying English independently. | **Strongly disagree** | **Disagree** | **No opinion** | **Agree** | **Strongly Agree** |
| 5. I think vocabulary is an important part of language learning. | **Strongly disagree** | **Disagree** | **No opinion** | **Agree** | **Strongly Agree** |
| 6. I know how to study vocabulary effectively. | **Strongly disagree** | **Disagree** | **No opinion** | **Agree** | **Strongly Agree** |
| 7. I enjoy learning vocabulary. | **Strongly disagree** | **Disagree** | **No opinion** | **Agree** | **Strongly Agree** |
| 8. Learning vocabulary is easy. | **Strongly disagree** | **Disagree** | **No opinion** | **Agree** | **Strongly Agree** |
| 9. I think computers and the Internet can help me improve my English vocabulary. | **Strongly disagree** | **Disagree** | **No opinion** | **Agree** | **Strongly Agree** |
# APPENDIX B

### Questionnaire Two

Name: ………………………
Class: ………………………

For the questions 1-10, indicate your answer by circling the appropriate number to match your opinion.

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>No opinion</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>After taking CAVL courses, I know how to benefit from my PC to improve my English vocabulary.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>CAVL is a stress-free environment to learn English.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>CAVL is a more casual way of learning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>I know more about how to use computers after having taken CAVL courses.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>It takes less time to learn vocabulary during CAVL classes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>I do not have technical problems in using computers during CAVL classes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>I prefer CAVL to traditional classrooms for Learning vocabulary</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>I prefer to read and learn vocabulary via computers.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Learning vocabulary via computers is more interesting and useful when supported with more information such as pronunciation of vocabulary</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>Computers help me self-correct my spelling and pronunciation.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
DESIGN AND DELIVERY OF ONLINE COURSES IN YCMOU

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ABSTRACT

The School of Science and Technology of ‘Yashwantrao Chavan Maharashtra Open University (YCMOU)’ has proposed to offer ‘Web Based Live Teaching Learning Support’ from ‘real' teacher, with ‘Live Virtual Online Class (LVOC)’ integrated with ‘Learning Management System (LMS)’ for all courses of all programmes on offer. In the first phase, school has started LVOC for total ten courses in from Feb 2014. This web-based system is designed to provide an opportunity to:

- maximize interaction, discussion and spontaneous exchanges with ‘real’ teacher during live virtual class
- present quality learning material to individual to suit his/her learning styles, interests, needs, and at their own pace.

Further, LVOC is integrated with LMSs to present a set of features designed to provide an effective continuous assessment. The strategies adopted to provide learning support with guidance at every step of the way is elaborated here. In the next phase, school is planning to launch ‘Online Certificate Course’ for which all planned LVOC are already developed. As Learning is a collaborative process, authors have suggested additional strategies to be incorporated by ‘real teacher’ to offer ‘Online Course’. This will help to ensure better quality and to develop confidence, comfort, and experience in online teaching.

Keywords: eLearning, Online Courses, Learning with Technology Enhancement, LMS, Live Virtual Online Class, Distance Learning.

INTRODUCTION

One of the goals of ‘Yashwantrao Chavan Maharashtra Open University (YCMOU)’ is to provide an inexpensive, easy access and flexible learning opportunities to every enrolled learner. Most of enrolled learners have diverse academic backgrounds, interests, and motivation. Hence, they require 24x7 learning support from anywhere, anytime. This expectation shifted the course content delivery from contact session (counseling session)
along with printed self-instructional textbooks to the use of technology for dissemination. For almost all learners, real learning starts only when learners start interaction with the received information and with the learners in the learning community.

Hence, to provide best learning experience to learners, teacher is required to maximize interaction, discussion and spontaneous exchanges instead of only delivery of information or course content. One of the possible solutions is to make available course content and teaching learning support as per the learner’s needs. We believe that learners’ needs could be addressed through the use of eLearning. The School of Science and Technology of ‘Yashwantrao Chavan Maharashtra Open University (YCMOU)’ has proposed to offer ‘Web Based Live Teaching Learning Support’ from ‘real’ teacher, with ‘Live Virtual Online Class (LVOC)’ integrated with ‘Learning Management System (LMS)’ for ten courses from Feb 2014. Here, the strategies used for just getting started in the online environment are elaborated. Research and experience (Boettcher, 2007) suggests that these strategies contribute to an effective, efficient and satisfying teaching and learning experience for both Teacher and learners. Authors have suggested additional strategies which can help to ensure better quality and to develop confidence, comfort, and experience in online teaching.

“Live Virtual Online Class (LVOC)” Model

School has developed a ‘Teaching-Learning Process’ model referred as learning cycle (Killedar, 2010) to provide an enjoyable and effective learning experience to all enrolled learners, is shown in Figure: 1. This model is derived by applying the Instructional Design on Educational and Information Technologies to provide the best interactive environment on web based education. It consists of only few well organized components (Kamlaskar and Killedar, 2012) such as:

- Learning Objectives
- Delivery of information,
- Interaction,
- Evaluation and
- Feedback.

![Learning Cycle Diagram]

Figure: 1
‘Teaching-Learning Process’ Model
Each ‘Live Virtual Online Class’ template is designed based on learning cycle’s components and embedded in Moodle LMS to provide complete learning experience to the learners.

Features (Killedar, 2013) of ‘Live Virtual Online Class (LVOC)’:

- Live Teaching to all enrolled students from single ‘Real Teacher’
- Live streaming Audio and Video where teacher and students can see and hear each other
- Each LVOC is about 40-60 minute duration. The ‘Live Audio Lecture’ is synchronized with bulleted items on the slide. ‘Active Learning’ such as question answers, problem solving, assignment, self-test, discussion etc is an integral part of each LVOC.
- During Live class, each student can interaction with ‘real’ teacher by using various options such as raise hand to indicate teacher a need for student, screen sharing, chatting, whiteboard etc
- To test understanding of content covered in each LVOC, Self-Test is made available to student. Student can opt to appear for self-test after each LVOC or at the end of each month. Self-Test consists of ‘Multiple Choice Questions’ each of 2 Marks. Student will get immediate feedback with test score.
- Each LVOC is automatically digitally recorded and can be downloaded for revision or revisit.
- Each LVOC is well-organized and easy to navigate

Software/Hardware Requirement

- At University End:
  - Latest version of Moodle at http://www.ycmou.ac.in
  - Domain hosting on Cloud server with 4CPU cores, 8GB RAM, 100GB server Disk Space, 100 GB bandwidths with 64 bit latest stable Linux operating system

- At Teacher End:
  - Hardware
    - Latest fast notebook or Tab with integrated webcam
    - Multimedia Headphone with Mic,
    - A4 size Take Note (Model A414 from iball.co.in) [optional]
  - Software
    - Free /Microsoft office Suite with PowerPoint, Word etc,
    - Fast (1 MBPS or Higher) broadband internet connection,
    - Subscription for "Live Virtual Online Class" service from any reputed supplier like www.wiziq.com

- At Student End or At Study Center:
  - ‘WizIQ Desktop App’ available free to download from http://www.wiziq.com/desktop
  - Internet Connection with Minimum 512 Kbps speed,
  - Speaker/Ear Phone
Strategies Implemented to Offer 'Live Virtual Online Class (LVOC)'

Be Present in Virtual office hours at the Course Site

In a face-to-face classroom, a learning community gets developed when Teacher actively interacts and engages students. The same type of intellectual and personal bonds happens in an online setting only if Teacher who shows their presence multiple times in a week, and at best, daily.

www.ycmou.ac.in/course/view.php?id=43

Figure: 2
Course Webpage

Hence, at the beginning of a course, framing of course policies is very helpful like setting regular times to meet in a virtual classroom or be available by email or discussion forum and for how many hours, almost in real time similar to office hours, can be invaluable. Teacher should be present on schedule time at the course site to motivate the learners to follow the time schedule and able to be online together at the same time.

For example, ‘V63: Diploma in Electronics and Telecommunication Engineering’ programme has launched from 'real' teacher; with "Live Virtual Online Class (LVOC)"
integrated with "Learning Management System (LMS)" (Killedar, 2013). The course web page is shown in Figure: 2, some of features are:

- Prior to start live virtual online class, ‘Essential Course Information’ is made available to everyone with free access. The screen shot is shown in Figure 3.
- Both Teacher and learner to be present on schedule time, the scheduled of live lectures within each month is displayed in advance as a table of content on left side of web page. The screen shot of it is shown in Figure: 4.
- Along with Monthly live lecture links, Model "Question-Answer" Forum based on syllabus covered in each month and Self-Test for each month which is made available 24 x 7 basis, for learners, from anywhere.

---

Figure: 3

‘Essential Course Information’ web page
CREATION OF A SUPPORTIVE ONLINE COURSE COMMUNITY

A good strategy for developing a supportive online course community is to maintain harmony between Teacher to student, student to student and student to resource interaction equally.

Figure: 4
'Time schedule of LVOC’

Figure: 5
'The Community of Inquiry model’ by Garrison
According to ‘The Community of Inquiry model’ of Garrison et.al (2000), shown in Figure 5, learning “occurs within the Community through the interaction of three core elements... teaching presence, social presence and cognitive presence”.

Following three strategies are used to encourage peer-to-peer, student-to-student engagement and thus the building of a course community:

**Teaching Presence**
To make interaction of Teacher to learner more effective, Web based system of ‘Live Online Virtual Class’ is designed as *weekly* coaching with following features:

- Live Online Virtual Class template for each course along with the synchronized audio lecture is prepared based on instructional pedagogy.
- Each Live Virtual Class of about 40-60 minutes duration which starts with personal introduction of Teacher and a note of their teaching strategy such as clearly stated learning objectives using Bloom’s taxonomy, Opening of topic to arose curiosity of topic to be taught, key Terms, well-illustrated content using one or more type of presentation style like text, graphics, PDF, Image, Video, Summary of the content covered etc.
- Each Live Online Virtual Class can be used “plug and play” in Learning Management System (LMS) and track the learner’s process.

**Social Presence**
While completing learning activities, interaction between learner-learners, learner-teacher, and learner with other community is essential. For this;

- ‘Live Active Learning’ consisting of question-answers, problem solving, assignment, self-test, discussion etc. and is made an integral part of *each* Live Online Virtual Class.
- During Live class, Social presence was achieved through Synchronous discussion- ‘Chat box’. It provides an opportunity to everyone actively participates at the same time.

**Cognitive Presence**
Here, Cognitive presence is constructed through ongoing conversation about content and supplementary learning material. For this, Model ‘Question–Answer’ forum and Self-Test are provided.

- Model ‘Question–Answer’ forum: First, Learner has to post his/her answer to model question before actual Model answer provided by Teacher can be seen. This helps to enhance understanding and interpretation skill of learner. Also help to learner to compare and verify his / her version of Model Answer with "Model Answer and Marking Scheme by Teacher". Posting views as a reply to discussion thread is itself a projection of interaction. Figure 6 shows the screen shot of Model ‘Question–Answer’ forum.
- Self-Test: Online monthly Self-Test is provided to encourage learner to interact with learning material frequently. To make evaluation experience enjoyable, 5 minutes duration Self-Test is provided based on the content
covered in Live Online Virtual Class. Learner is required to answer, total 5 Multiple Choice Questions (MCQs), each of 2 marks. Figure 7 shows the screen shot of Self-Test.

- Here, understanding, interpreting and finding suitable solution to Self-Test questions and ‘Model Question’ by the learner is the key example of cognitive presence.

![Image of forum and test questions]

**Clear Explanation for How Learners and Teachers Communicate and Time Required by Learners to Work on the Course Each Week**

In online learning environment, it should be clear to learners and teachers as to how much effort and time will be required on a weekly basis. Online learning is equally demanding time and effort as if one were attending face-to-face classes. Hence, time to do the work needs to be scheduled and planned for, is mentioned in 'Essential Course
Information’ of each online course. Further, information about eLearning tools (chats, mail, digitally recorded live virtual class, discussion forum, phone etc) is made available to everyone, to share responses and flexibility in access and review content.

**Use ff Both Synchronous and Asynchronous Activities as Per Learners Need**

Using Moodle course management systems and WIZIQ live virtual class along with audio tools made it possible to do almost everything as in face-to-face classrooms (Kircher, 2001). Further, learners are engaged in more collaborative and more reflective activities by using chat, white board, screen sharing, offering raise hand option to indicate teacher a need for support or interaction. In each live virtual class what happens is automatically recorded and archived. This can be later on used for review and occasionally revision.

For example, understanding complex content such as principles, laws, derivation etc, teacher can make use of the synchronous tools and learners enjoy getting together from anywhere at a specific time to interact in real time. In such situations, real time problem-solving and question and answer review sessions are very effective learning experiences. Whereas some activities require thinking, plan, write and summarize which makes learning most effective for an individual. This can be achieved using asynchronous interaction which is possible from anytime, anywhere.

**Suggested Strategies to Enhance Teaching-Learning Experience of Offered Course**

To find a harmonious balance between online access to knowledge and face-to-face human interaction, author has proposed enrichment in Teaching-Learning Experience of offered courses:

**Suggestions to enhance Teacher Presence**

- Many teachers who are new to the online environment may concern about the impact of virtual classroom interaction. Similarly, many students who are new to online environment may worry about this new way of learning and greatly appreciate a support from teacher. Before starting LVOC, teacher may send ‘Welcome Mail’ to all enrolled learners. It may include profile of teacher and a message that greets the students and informs them as to how to get started and how to get help on course homepage.

- Plan a ‘first exercise’ (not related to course content) which encourages learners to interact with online environment and other follow learners. This activity should build a confidence that teacher is available, approachable, supportive, and actively interested in mentoring learners. For example, create a social space ‘CollegeKatta’ on the forum for students to do informal discussions not directly related to course but do casual conversation of their surrounding and sharing of daily lives. Teacher may also meticulously respond to each introduction individually so that class will know that teacher is interested in getting to know them. With this small change, learners will begin to feel comfortable responding to each other in discussion areas.

**Suggestions to enhance Social Presence**

- Learning within an online course community will work better for some students but some students may choose not to participate very actively at all. Teacher must plan few activities which require a formation of small
study group of 2, 3 or 4 learners. In small group, learners can assume responsibility for supportive mentoring of fellow learners and summarizing key points of a class assignment/discussion.

- Online courses can be more enjoyable and effective when learners have the opportunity to work through concepts and assignments with either one or more fellow students [1][4]. At the same time some students work and learn best on their own. Therefore, designing a variety of activities and experiences are essential to well working of the community. So, it is highly recommended to build an options and opportunities for learners to work in both modes, that is, together and individually.

- For example, assigning mini-project or collection of technical information of latest electronics gadgets which uses ‘Digital Electronics’ concept is more encouraging and enriching experience if learner are allowed to post related video or report on discussion forum.

**Suggestions to enhance Cognitive Presence**

- Immediate feedback to learner to each Self-Test question boosts cognitive presence as learner has to apply their understanding of course content from their own personal reflections and the readings. Hence, immediate feedback should be provided to each correct and wrong answer of Self-Test question.

- Use randomization in Self-Test question and its options

- On weekly basis, track learners progress, identify and assist learners quickly

**Focus on Content Resources and Links to Current Events**

Learners enrolled in Online courses wish to do learning anywhere, anytime. Always login through Personal Computer or carrying around large, heavy textbooks and even laptops sometimes feels like an offbeat.

Content that can be accessed via smartphones, ipads, ipods, and mp3 players are welcome additions for many learners. Teacher should provide links for current events related to topic to be taught in LVOC. This strategy is mostly applicable to supplementary resources and library resources. At the starting of each online course, ‘External Links for Learning Resource’ and ‘Learning Resource Repository’ should make available.

**Always Ask for Feedback or Suggestions on “How is the Course Going?”**

Informal discussions with learners’ or ask early feedback on what is working well in a course and what might help them have a better course experience. This early feedback will be helpful to do corrections and modifications for enjoyable learning experiences. Teacher may ask for suggestions or feedback by sending email to individual learner and create personalized touch in virtual environment.

**Prepare Discussion Posts that Invite Questions, Discussions, Reflections and Responses**

In online environment, ‘Discussion Forum’ should reflect discussions equivalent to class discussions in a face-to-face. In fact, online discussion forum is a powerful tool as they are asynchronous, requires written and/or audio response, provides time for thought and reflect. Hence, the post on discussion forum should encourage critical or creative
thinking of learners. It can be made more effective and human friendly by,

- Creating Post or inviting questions for which learners have to apply the concepts that they are learning
- Asking ‘Why’, ‘How’, ‘Clarifying’ or ‘propose an alternative strategy’ type of questions that encourage learners to think about what they know and don't know.
- Providing guidelines to respond to other learners post such as ‘what you liked or agreed with’ or encourage learners by posting ‘I would encourage you all to look through post …….’
- Always reminding the due dates of the task to be completed.
- Encouraging learners to submit online assignments in time and teacher should provide friendly feedback with smiley.
- Providing mid-point summary and/or encouraging comments on the received responses at the end of each month.
- Posting a ‘How are you doing?’ question in the discussion forum at least once in a week to create feeling of caring, an indication of teacher presence and learners are learning along with teacher.
- Posting announcement or comments about topic to be covered for example ‘We focus in this week on……… or ‘We continue this week with……’
- Set the minimum number of postings required of each learner for each discussion with due dates to manage learners workload
- Providing choices and options for learners, especially for working professionals, to link the learning more directly with their work experiences and needs. This helps in developing personalized and customized learning.
- Developing scenarios like problem solvers which do not necessarily have a right or wrong answer but they create debate and get learner to think. This may possible in some courses only. However, it involves collaboration with others and brings together a range of different experiences and perspectives from others which are an advantage of e-learning.
- Reminding to ‘Log In’ to course at least 2 times a week - answer email, browse discussions, post reply, and do revision for the content covered in the week.

**Links to Current Practices and Examples that are Easily Accessed to Learners**

Learners enjoy seeing how what they are learning links to current practices. Organizing course discussions and links to current practices or applications is often motivates to learners. So, encourage learners to make the use of Internet resources. The best way to enrich these resources is:

- To include tutorials, simulations and supplementary material in course.
- Incorporate assignments and discussions which involves learner active participation in identifying high quality content available online
- To provide options and choices in assignments and special projects based on current practices

**Combine Core Concept Learning with Customized and Personalized Learning**

When learner first time gets aquatinted with a new field or discipline, often focus on learning the vocabulary. Actually, this can be done without teacher support. Hence, the
job of teacher is not only to make learners aware about core concept and learning objectives of course but make learners’ thinking visible. Provide more attention on interaction and engagement of learner with the core concepts and skills of a course. Therefore Teacher must teach in a linear fashion to stimulate learner’s growth from concept awareness to concept acquisition. With use of Discussion Forum, Blogs, Journals and small group activities, teacher can engage learners to create, talk, write, explain, analyze, judge, report and make thinking visible. Hence, personalize learning by providing freedom to use various tools while performing task.

Plan A Good Closing Activity for the Course
In online environment, well designed ending of a course provides opportunities for reflection and integration of useful information covered in the course. It should include reports, summaries and analyses of activities performed by learner in due course of time with grade performance. These provide insights into just what useful knowledge learners are taking away from a course and where there is scope of performance improvement.

Least but not the Last, Teachers Should have Competencies to Do Online Teaching
Many excellent classroom teachers have great difficulty to teach in online environment (Wolf, 2006). There may be an access issue and/or it is a matter of being comfortable using technology. In order to teach well in online, a high degree of comfort with the tools and systems being used is required such as discussion forums, chats, Powerpoint, emails, Video, Animations, LMSs etc. To make teachers confident about online teaching environment (Kircher, 2001), University may adopt one of the following strategies:

- Establish training programs to prepare teacher to teach online. Creating short-5 to 7 minute-demonstrations or mini-lectures using the tools and systems they will be using when they teach might be a good practice. This will provide better understanding of online teaching and required competencies (Wolf, 2006).
- Teacher should have firsthand experience as online learners in order to understand how to be effective in an online environment. There are many free online courses (Referred Websites) are offered by MIT (edX.org), Stanford (Coursera.org), iversity.org, udacity.com etc. Recommend to Teacher to explore at least one module and assessment approach from any free online course to know ‘how to become interactive, social and accessible in online environment’.

CONCLUSION
In order to capitalize the strengths of ‘Live Virtual Online Class (LVOC)’ and to create a more active learning environment for YCMOU learners, authors have suggested enrichment in the design and delivery of offered courses. While offering a collection of LVOCs as online courses,

- Be focus on interaction and engagement of learners with the core concepts and skills of a course.
- Offers various Synchronous and Asynchronous tools for reinforcing key concepts and understandings
- Develops a habit in learner for asking questions and interact with peers
- Supports the community of learners and contributing to the overall growth of
the group
- Develops activities which require extensive use of ‘Learning Resource Repository’
- Offers Freedom and power to use various eLearning tools
- Blended mode with feedback-oriented approach to teaching is essential as online courses are not the right fit for all learners.

By incorporating these small changes along with LVOC, School of Science and Technology can enrich learning experience better for every learner.

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EXPERIENCE IN IMPLEMENTING RESOURCE-BASED LEARNING IN AGRARIAN COLLEGE OF MANAGEMENT AND LAW POLTAVA STATE AGRARIAN ACADEMY

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ABSTRACT

The introduction of resource-based learning disciplines of computer cycles in Agrarian College. The article focused on the issue of implementation of resource-based learning courses in the agricultural cycle computer college. Tested approach to creating e-learning resources through free hosting and their further use in the classroom. Noted that the use of Internet technology makes it possible to create educational environment Agrarian College is through the development and deployment of electronic educational resources on the Web, because the Internet is constantly expanding its capabilities, services, hosted with them information that is relevant in terms of education.

The author proposes to consider e-learning resource "Інформатика+="Information+": http://informatika-resurs.jimdo.com which combines the characteristics and principles of creation of electronic media for educational purposes and is a modern didactic resource for the study of the disciplines of computer cycle. Demonstrates Cloud resources from the disciplines of computer cycle, e-learning content "IT—education", developed with the help of Google services for online learning. Cloud resource is a collection of electronic teaching systems such disciplines of "Computer Science and Computer Engineering", "E-commerce", "Data Protection", "Computer technologies in legal activity". The study is focused on free hosting for the development of electronic learning resources (Jimdo, uCoz), which enable the creation of a site (does not require special skills and knowledge of programming languages), fast and, most importantly, free of charge, which is particularly important given the current financial support of agricultural colleges.

Keywords: Resource-based learning, e-learning resources, information and educational environment, Agrarian College.

INTRODUCTION

European Commission in the plan of businesses on questions electronic education defined essence of European educational space as use of new hypermedia technologies and Internet technologies for the improvement of quality of studies, facilitating access to the resources and services, and also remote exchange and collaboration. Confession of electronic education became a next step by the necessary attribute of Bolonsky of process (Bologna, 2004).
In this context passing to the resource-based learning (RBL), which is sent to the use of pedagogical innovations and modern of informatively-communication technologies (ICT), active bringing in to the pedagogical process of librarians and it is oriented to education during all life, is logical and actual (Kononets, 2012).

A large role in the educational process of modern agrarian college at RBL of students is played by the task of creation and introduction of the integrated educational environment, the basic purpose of which is a high-quality change of process of teaching of base and special disciplines and control of knowledge. Informative educational space is computer-integrated as didactics basis of RBL will allow to activate the process of creation of scientific and educational informative resources of college, extend possibilities of studies, giving practical skills of work in a hi-tech environment, to promote qualification of teachers in area of the practical use of IKT in an educational process.

Introduction of RBL of disciplines of computer cycle in the environment of students of the Agrarian College of Management and Law Poltava State Agrarian Academy actualized a requirement in creation of electronic educational resources for the use their students in the process of studies and self-education.

**ANALYSIS OF THE LAST RESEARCHES**

The system RBL and problems of its introduction in practice of studies of students of institute of higher are investigated by the foreign scientists of Abdul Paliwala, Margaret Butler, Elizabeth Green, Janet Macdonald, Janette R. Hill, Michael J. Hannafin, Jacqueline Smith-Autard, Said Hadjerrouit, Paul Maharg, Christine Greenhow, Sara Dexter, Dale Holt, Christine Armatas, Mary Rice. Development, creation and introduction of electronic tools of studies actively engage in A. Bashmakov, M. Belyaev, V. Bykov, V. Vul, A. Hrechihiin, V. Gura, V. Demkin, A. Derevnina, M. Zhaladak, P. Zalmanov, L. Zaynudinova, A. Spivakovsky and many other foreign and home scientists which simply determine a necessity and actuality of the use of these tools for an educational process.

Said Hadjerrouit (Norway), investigating tools, forms and methods of RBL, suggests to carry out the web-oriented studies potential of which is so large, as far as rich in educational resources the World wide web. The methods of realization of such studies foresee the study of web-bases of virtual studies, methodology technologically-oriented or on-line studies, use of electronic Internet resources and development of own educational web-resources (Hadjerrouit, 2005, Hadjerrouit, 2010). In the process of research of didactics possibilities of services of the Internet and on-line studies, Dale Holt, Christine Armatas, Mary Rice (Australia) mark, that the systematic use of resources and query of the Global network facilities assists a grant to the results of studies of practical orientation, promotes the level of informative culture of students, and also logical and critical thought (Holt et al., 2002). Under RBL understand the complex of forms, methods and tools of studies, aimed at the integral going near organization of educational process, which is orientated not only on mastering of knowledge and acquisition of skills but also on training of capabilities of independent and active transformation of informative environment by a search and practical application of informative resources (Kononets, 2012).
AIM OF THE STUDY

Aim of the article - to present experience of introduction of the resource-based learning of students at the study of disciplines of computer cycle the tools of electronic educational resources in the Agrarian College of Management and Law Poltava State Agrarian Academy.

EXPOSITION OF BASIC MATERIAL

In spite of certain problems (financial, skilled, material and technical), it is possible to consider understanding of importance of electronic education great success in practice of agrarian institutes of higher of I-II of levels of accreditation: at first exceptionally as the use of forms of the controlled from distance education, understanding of electronic education as possibilities of considerable perfection of ordinary forms of studies came later. It should be noted that the controlled from distance education in agrarian colleges is in the embryonic state, considering exactly by the problems marked higher.

For this reason it is expedient to embed RBL, which foresees development of informatively-educational environment of college by means of modern IKT and web-technologies. Today under an informatively-educational environment (IEE) understand single informatively-educational space, built by means of integration of information on traditional and electronic transmitters, computer-telecommunication technologies of cooperation, which contains virtual libraries, distributed databases, educational and methodological complex and extended vehicle of didactics, in which principles of the new pedagogical system (Biletska, 2012).

The important stage of integration of the modern informative systems to IEE of agrarian colleges in the context of RBL are creation and introduction of electronic educational resources and e-librarys which support corresponding multidimensional access to units of maintenance, that allows a reader or listener to pick up necessary materials in a sufficient measure.

An e-library in this case comes forward as a center of not only traditional systematic directory but also by the mestome of maintenance of Video Library and Netnews, communicating through deliveries of lists, due to which users which placed the address of e-mail in this list will be able operatively to get information about new receivables (Shahmaev, 2000).

Under an electronic educational resource (EER) understand educational, scientific, informative, reference sources and tools, worked out in an electronic form and presented on transmitters any to the type or placed in computer networks which are recreated by means of electronic digital hardware and needed for effective organization of educational-educator process, in the part regarding to its filling by high-quality educational and methodological materials (Decree, 2012).

Problems with providing of students textbooks, rapid obsolescence of existent textbooks from an informatics and other disciplines of computer cycle, absence of only didactics resource, own desire of students to have educational materials in an electronic form at first induced us to development of electronic textbooks and manuals.

Today the requirements of time transform an electronic textbook (manual) in an electronic educational resource and carry him to the World network, realize the same
more wide access to him, individual trajectory of studies, interactive socializing with a teacher, common use and creation of its content on the basis of modern web-technologies and services of the Internet, freedom of choice for a student. Therefore development of valuable EER became the logical, self-weighted and necessary next step in a network the Internet.

It follows to pay attention that EER can contain and electronic textbooks, and computer trainers, and virtual laboratories, and valuable electronic educational and methodological complexes of disciplines, and also tools on-line intercourse and other services of the Internet.

As marks O. Spirin, the use of electronic materials is special characteristics, valuable for effective organization of public life: inexhaustibility, high speed of distribution, economy, ecological cleanness, considerable shelf-life at insignificant resource charges and others like that.

Modern tools of working of data and connection are basis of new ICT, which all anymore determine maintenance, scales and rates of development of other technologies (Spirin, 2007, p: 14).

Development of EER, advantage of which is availability of the use, adequacy to the level of development of modern scientific knowledge, providing of individual rate of study of discipline, by the tools of web-technologies, in particular, by the tools of free hosting and their further use allows to decide the next tasks of educational process in a college:

- orientation on the certain category of users, on flexible satisfaction of complete spectrum them informative necessities;
- realization of motivation of students is to the studies and self-training;
- realization of any stage of employment (actualization of knowledge, serve of new material, control of knowledge and others like that) is in the new context of the use of modern web-technologies;
- providing of possibilities of context search and information retrieval activity;
- providing in full modern educational and methodical materials (operation ability of updating of materials);
- the valuable interactive socializing is with a teacher;
- more complete realization of principle of evidentness by tools multimedia (texts, graphic arts, sound, video);
- creation of computer-integrated courses;
- upgrading of electronic tools of studies after the aggregate of parameters: rich in content, technical and technological, didactics, methodical and ergonomic design;
- unity of functionally-technological purpose: collection, accumulation, working, distribution of informative resources of educational purpose;
- cost of educational establishment effectiveness;
- scale of application of the finished good (thousands-millions of users);
- access to the digital scientific and educational and methodical resources of e-librarys: electronic in-informative resources of educational environment of the open pedagogical systems, and also working of these resources with the aim of preparation, classification and high-quality analysis of electronic documents and editions;
an orientation is on informatively-technological support of educational activity in industry of leading divisions of science and practice, on application of innovative tools of studies and pedagogical technologies;

- forming of open educational environment.

The use of EER will give to the participants of educational-educator process of college of possibility to get necessary knowledge, freely using practically unlimited on a volume informative resources, modern ICT and web-services.

Informative resources are databases and knowledge, computer, including multimedia, systems of educational purpose, video- and audio records, e-librarys, together with traditional textbooks and methodical manuals, form the informatively-resource providing of open education, accessible to the wide audience of users.

With the aim of decision of question of correlation of the controlled from distance and traditional studies, not contrasting modern electronic tools and technologies of studies to the traditional forms, and organically complementing them to the uses in an educational process, carrying out on this basis effective organization of independent work of students in the Agrarian College Of Management And Law Poltava State Agrarian Academy the electronic educational resource of "Information+": was worked out http://informatika-resurs.jimdo.com (Figure: 1).

The Electronic educational resource of "Information+" combines in itself all descriptions and principles of creation of electronic textbooks and other electronic tools of educational purpose and is a modern didactics resource for the study of disciplines of computer cycle, which are laid out in a college.

This resource is run-time, has the specialized integration of functional possibilities; new components of software can easily be plugged in a depository for their next use and executes the basic task – integration of informative resources and effective navigation for them.

An important factor which influences on success of introduction of similar informative resources is methodological approach of the systems to their planning and realization. Such approach the use of CASE of-technology is the basis of, which allow to execute the design of the informative system on all phases of her development: on the stage of structural analysis, global planning and realization (Zavyalova, 2001).

The EER of "Інформатика+="Information+" is created by means of designer of sites of Jimdo, which does possible creation of sites simply (does not require the special abilities and knowledge as if programming), quickly and, mainly, free of charge, that it is especially important, taking into account the modern state of the financial providing of agrarian colleges.

A modern open environment of EER of "Information+" is potentially unlimited in relation to the volumes of resources, which can be applied in an educational-educator process, quantity of users which can use its tools and technologies, and that is why and amounts of students, which can be jointly brought over to uniting of only didactics task. In such environment additional are created for realization of different aims, strategies and trajectories of studies and education of student as a future specialist, for providing of adaptation of components of EER to individual possibilities and necessities of students.
In other words, EER on the whole substantially enriches didactics possibilities of the pedagogical systems, strengthens them didactics descriptions which are the indisputable positive sign of open educational environment.

For successful introduction of RBL of disciplines of computer cycle we used services of Google and worked out the Cloudy resource from disciplines of computer cycle (Figure: 2). A cloudy resource shows by itself aggregate of electronic educational and methodical complexes of such disciplines of "Computer Science and Computer Engineering", "Electronic commerce", "Data Protection", "Computer technologies in legal activity" and other the Cloudy resource contains videolectures, tests and mediafolder.
An alternative to full distance learning is to organize online learning with the use of electronic content-developing electronic courses distance learning opportunities (registration, obtaining temporary access to educational resources, virtual classes, monitoring progress, etc.). Based on free hosting type uCoz, sites.google.com.

Services of Google enabled organization on-line of studies. In Agrarian College Of Management And Law Poltava State Agrarian Academy we organized two such the sites on electronic educational content "IT-osvita" [http://baliuk.ucoz.ua](http://baliuk.ucoz.ua) (Figure: 3).

It is sites for the study of disciplines "Economic cybernetics" and "Internet technologies in informative activity" (Figure: 4).
On a site on-line study it is needed to be registered. Registration is actual in a period the study of discipline. A site contains electronic educational materials and electronic magazine of success.
Familiarizing with electronic educational resources is possible on a site the Resource-based learning: methodical portal of http://rbl3.webnode.com.ua (Figure: 5).

RBL of disciplines of computer cycle, oriented on the use of such EER, allows to realize all principles of modern didactics and next possibilities: openness and availability of
studies, overcoming of physical limitations of man, expansion of audience of students; individual orientation of studies, creation of comfort terms for students and teachers, account of individual psychological features (perception, memory, thought), individual rate of studies; development of informative culture and competence, skills of work is with the modern tools of ICT and web-services; socialization of studies, account of personality-communicative features of students.

It should be noted that today the basic criterion of efficiency of the use of new information technologies in an agrarian college is already a not presence the determined amount of computers, but creation of only IEE.

Every Agrarian College must have a collective which owns an informative culture and information technologies of studies. Creation of IEE of college provides:

- continuous education (the dynamics of development of modern technologies requires for support to qualification continuously to promote the professional level of workers);
- open education (high availability of education is needed for satisfaction of growing necessities of society in specialists and achievement of success of individual in the modern world);
- assured result of studies (a graduating student must have the assured level of general and professional competences, readiness to practical activity without additional studies in the workplace, willingness to perceive and seize new technologies during all term of professional activity) (Yarem, 2013).

The use of Internet technologies does possible creation of IEE exactly due to development and placing of EER in the World Wide Web, as a network the Internet extends his possibilities, services, information which is meaningful from the point of view of education placed with her help constantly.

The internet is multifunction - next to functions searching (directories, collections of references, strategy of search in the searching systems) and informative (e-libraries, virtual centers, databases, e-books and magazines, methodical literature), he performs the interactive duty, that allows students and teachers to communicate by means of e-mail, forums and on the personal chats, SKYPE and ICQ, and also to arrange videoconferences.

The substantial line of electronic pedagogical activity is her orientation on education of students, which is based on organization of cognitive activity in individual and collective forms as activity self-education; system diagnostics of the personal internals of student and support of him individual increase; use of possibilities of IEE.

A meaningful factor for achievement of high-quality results is a level of organization of pedagogical process by a network teacher. To our opinion, using for RBL of such tools, as EER is useful, as allows untying the row of tasks:

- providing of availability of various educational resources;
- a receipt of universal and professional education is in a comfortable, adequate and corresponding form for a student;
- importance for psychological development of student in modern terms - its bringing in systematic educational activity under direct guidance of
teacher, process of possessing a culture and socialization pass by means of teacher;
- developing creative and intellectual flairs of student by means of the open and free use of all educational resources and programs, including, accessible in the Internet;
- exchange of data, communicative activity on the base of general interests, foremost professional and educational;
- an assistance to development of the controlled from distance education is in a college;
- organization of leisure, rest and development;
- an exchange of creation and general use of various educational resources experience is in all agrarian colleges of Ukraine;
- in-plant training, retraining or change of professional activity.

CONCLUSIONS

The problem of upgrading of preparation of students, optimization, intensification of process of studies and individualization of studies of students of agrarian colleges will do possible to decide the modern going near organization of educational process are the resource-oriented studies, and also ICT of educational purpose, which electronic educational resources which provide achievement of pedagogical and didactics aims are, no doubt, as with the use of ICT and web-technologies of possibility of organization of individual work of students and her quality broaden considerably.

RBL called to help in global educational space, it comes forward as effective integrative combination of traditional and innovative forms of education, as a tool of partial decision it urgent problems, in particular, gives possibility simultaneously with flexible at times and by the high-professional on maintenance study of different subject divisions of knowledge, forming of abilities and skills of work from many educational disciplines to provide intensive practical application those, who study, by methods and tools of informatively-communication technologies, develops ability and skills in modern science and practice.

Introduction of RBL in agrarian colleges is a necessary condition for achievement of modern level of quality of agrarian education.

The conducted research does not dip out all aspects of introduction of the resource-oriented studies of disciplines of computer cycle in agrarian colleges and in further requires integral, system consideration and analysis of tools, methods and methods of its organization.

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ONLINE DISTANCE EDUCATION: TOWARDS A RESEARCH AGENDA

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INTRODUCTION

*Online Distance Education: Towards a Research Agenda* is edited by Olaf Zawacki-Richter and Terry Anderson. The first edition of the book was published in 2014 in Edmonton by AU Press, Athabasca University. The online edition of the book has a total of 507+xii pages. The ISBN of the book for different versions are 978-1-927356-62-3 for print, 978-1-927356-64-7, for epub and 978-1-927356-63-0 for PDF. Doi number of the book is 10.15215/aupress/9781927356623.01

One of the editors of *Online Distance Education: Towards a Research Agenda*, Olaf Zawacki-Richter is a Professor of Educational Technology at the University of Oldenburg, Germany where he teaches in the School of Education and Social Sciences as well as the Center for Lifelong Learning. Zawacki-Richter held a fixed term professorship in Educational Technology at the Fern University in Hagen, Germany's Open University between 2008 and 2010. The other editor, Terry Anderson is a Professor of Distance Education (DE) and researcher in the Technology Enhanced Knowledge Research Centre at the Athabasca University, Canada. He is a widely known researcher in DE with significant contributions to the field.

*Online Distance Education: Towards a Research Agenda* is actually part of a series of studies. In the first study, Zawacki-Richter (2009) developed a classification of research areas employing Delphi Technique (Table 1). In the second study, Zawacki-Richter, Bäcker and Vogt (2009) identified gaps and priority areas according to this classification of research areas and analyzed 695 articles published in five prominent DE journals between 2000 and 2008.

Zawacki-Richter and von Prümmer additionally (2010) investigated gender and collaboration patterns in distance education research. As a follow up study, Bozkurt et al. (2015) presented trends in the field of DE research during the period of 2009-2013. The trends were identified by an extensive review of seven peer reviewed scholarly journals by using classification of research areas developed by Zawacki-Richter (2009).

In contrast to previous studies intended to present research trends in DE, in this book Zawacki-Richter and Anderson (2014) provide a comprehensive survey on the state of online distance education as an independent field of inquiry, while also offering a clear
orientation for future research. In this book, these research areas were discussed by leading DE researchers to draw on their expert knowledge and professional experience to give an overview of the state of the art in each research area and derive research needs based on that.

**REVIEW OF THE BOOK**

In Foreword of the book, Otto Peters stresses that DE is a multi-dimensional phenomenon. He further states that DE had a great success in very short time span and became a part of mainstream education. He finally sums up the research history of DE up till now.

In the introduction, *Research Areas in Online Distance Education*, Olaf Zawacki-Richter and Terry Anderson explain the structure of research areas to readers and briefly present related research. They also provide an executive summary of the chapters for all research areas.

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<tr>
<th>Table 1. Research areas of DE (Zawacki-Richter, 2009).</th>
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<tr>
<td>Macro level: Distance education systems and theories.</td>
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<tr>
<td>1. Access, equity, and ethics</td>
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<td>2. Globalization of education and cross-cultural aspects</td>
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<td>3. Distance teaching systems and institutions</td>
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<td>4. Theories and models</td>
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<td>5. Research methods in distance education and knowledge transfer</td>
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<td>Meso level: Management, organization, and technology.</td>
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<td>6. Management and organization</td>
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<td>7. Costs and benefits</td>
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<td>8. Educational technology</td>
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<td>9. Innovation and change</td>
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<td>10. Professional development and faculty support</td>
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<td>11. Learner support services</td>
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<td>12. Quality assurance</td>
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<td>Micro level: Teaching and learning in distance education.</td>
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<td>13. Instructional design</td>
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<td>14. Interaction and communication in learning communities</td>
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<td>15. Learner characteristics</td>
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**Part I: Macro-level: Distance Education Systems and Theories**

- Chapter 1, *Internationalization and Concepts of Social Justice: What Is to Be Done?* by Alan Tait and Jennifer O'Rourke, is about access, equity, and ethics. Social justice policy and practice are explained briefly, and their relationship with online education, the possible detrimental effects of the use of complex technological systems in online education in maintaining social justice are discussed. The authors emphasize that DE has a long and proud tradition of working towards maintaining and building social justice, yet they also call for means to achieve this in a technologically dominated world.

- Chapter 2, *Globalization, Culture, and Online Distance Learning* by Charlotte N. Gunawardena, deals with globalization and cross-cultural aspects. In this chapter,
increasing global impact of and response to cultural change is explained within online distance education perspective drawing attention to global diversity, especially in instructional design.

- **Chapter 3, Distance Education Systems and Institutions in the Online Era: An Identity Crisis** by Sarah Guri-Rosenblit, evaluates the confusing terminology that pervades DE systems and institutions. Rapid and disruptive changes of technological development and delivery platforms that define online education are discussed in terms of DE institutions. The open scholarship and open education movements are further discussed in this chapter.

- **Chapter 4, Online Distance Education Models and Research Implications** by Terry D. Evans and Margaret Haughey, focuses on the factors that contributed to the birth and development of DE and the contributions of these factors to DE theories and models. The evaluation of online distance education in parallel with technological developments and consequences regarding DE theories and models were presented.

- **Chapter 5, Methods of Study in Distance Education: A Critical Review of Selected Recent Literature** by Farhad Saba, examines research methods in DE. A critical examination of issues regarding methods of research in some articles in prominent DE journals is presented through the chapter from different perspectives.

**Part II: Meso-level: Management, Organization, and Technology**

- **Chapter 6, Organization and Management of Online and Distance Learning** by Ross Paul, deals with management and organization of the DE initiatives. This chapter addresses issues of research into management and organization, strategic planning and leadership, educational policy, and intellectual property and copyright. The importance of research-based leadership, the critical importance of institutional culture, and the need to break down the two research solitudes are stressed in the conclusion of the chapter.

- **Chapter 7, The Costs and Economics of Online Distance Education** by Greville Rumble, discusses costs and funding of DE. This chapter explains why the economics of education became an important field of inquiry and emphasizes the need for research on which socio-technological designs of DE would bring the highest rate of return of investment.

- **Chapter 8, The Use of Technology in Distance Education** by Gráinne Conole, focuses on Educational Technology. It explores the enormous potential of educational technologies and media and the opportunities they afford for innovative teaching and learning in formal, informal, and non-formal contexts. The author emphasizes the use of Web 2.0 tools and social media and the potential for open practice and a paradigm shift from expository teaching and receptive, passive learning to participatory, active, and social learner engagement.

- **Chapter 9, Innovation and Change: Changing How We Change** by Jon Dron, elaborates on DE technologies, their uses, production, dispersion, acceptance, and emphasizes innovation and change management. This chapter presents recursive, and rapidly evolving relationship between DE and technology.

- **Chapter 10, Professional Development and Faculty Support** by Margaret Hicks, reviews the issues regarding faculty development and proposes research topics about new methods in professional development training, its relevance to quality and the need for the expansion of such trainings in a world with increasing demand for online distance education.
Chapter 11, Learner Support in Online Distance Education: Essential and Evolving by Jane E. Brindley, explains learner support services. By highlighting student support in all forms of education, including online distance education, this chapter covers the three major sources that guide the development and design of learner support services: Theoretical models of learning theory, the ideas from customer management and support literature, and predictive models developed by testing support interventions and, largely, student persistence as outcomes or dependent variables. The chapter then proposes a research agenda for the improvement of student support services.

Chapter 12, Quality Assurance in Online Distance Education by Colin Latchem, draws attention to increasing demand for accountability and quality assurance for online and campus education systems and then puts forward a research agenda considering diverse facets of quality assurance for new models of online distance education particularly for Open Educational Resources (OER) and Massive Open Online Courses (MOOCs).

Part III: Micro-level: Teaching and Learning in Distance Education

Chapter 13, Major Movements in Instructional Design by Katy Campbell and Richard A. Schwier, portends that the online educational experiences are usually shaped by a western approach. This chapter presents an overall picture of both historical, sociological and pedagogical underpinnings of instructional design and emerging network based approaches such as connectivism by revealing connections between psychological theories, social epistemologies, and the cultural contexts. It also enlists the significant research into instructional design.

Chapter 14, Interaction and Communication in Online Learning Communities: Toward an Engaged and Flexible Future by Dianne Conrad deals with interaction and communication in learning communities. This chapter stresses the importance of social learning, and analyzes the interactions in particularly new types of online learning settings like OER, MOOCs, social media and mobile learning.

Chapter 15, Quantitative Analysis of Interaction Patterns in Online Distance Education by Allan Jeong explores various quantitative methods such as content analysis (computer-scripted discussions, machine-based learning systems), social network analysis, Markov Chain Analysis, sequential analysis, structural equation modelling and path analysis to analyze online discourse. The author draws attention to the importance of mixed-methods approach to investigate interaction and communication patterns in online learning communities, and provides implications for future research. This chapter poses an important role as it presents new approaches and guides researchers in the field to explain and explore online distance education.

Chapter 16, From the Back Door into the Mainstream: The Characteristics of Lifelong Learners by Joachim Stöter, Mark Bullen, Olaf Zawacki-Richter, and Christine von Prümmer, examines the theoretical foundations of lifelong learning and the current practices of it. The chapter also provides a comprehensive review of changing learner characteristics, illustrates how distance learners became mainstream while they were minority once upon a time and the implications of these for instructional design.

Chapter 17, Student Dropout: The Elephant in the Room by Alan Woodley and Ormond Simpson, discusses several reasons for student dropout and the low rates of successful completion in open universities. The chapter calls for action by
focusing on things we can change, measure, and improve student success in online distance education.

The conclusion chapter, *Towards a Research Agenda* by Terry Anderson and Olaf Zawacki-Richter, highlights the importance of structuring a research agenda which is defined as a collective effort designed by and for researchers so as to provide guidance, coherence, and support for the collective products of that research.

**CONCLUSION**

In sum, this book serves like a compass for online distance education researchers. It provides summary, synthesis and future directions of online distance education by defining research areas of DE and filling these areas with the scholarly experience and research based evidence. As it is stated in this book and other related articles mentioned before, it is clear that online distance education is a dynamic, interdisciplinary field that reacts to the changes swiftly. So, it is vital to keep the knowledge up to date through research on global, local or glocal dimensions.

The book also indicates a shift in terminology. It is important to note that the term *online distance education* is introduced as a natural extension of *distance education* into another medium. It was concluded that *online distance education* is both a revolution and an evolution. In other words, the earlier models of teaching and learning that have been smoothly adopted and applied create an evolutionary path, while the ones that have innovatively emerged and applied create a revolutionary path.

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