ASSESSMENT OF E-LEARNING NEEDS AMONG STUDENTS OF COLLEGES OF EDUCATION

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ABSTRACT

This study is a descriptive and survey type work. Main objective of this research is to explore e-learning system components needs among students of colleges of education (one year Bachelor of Education or B.Ed. degree programme) affiliated by University of Mysore, India. Needs assessment is one of the main investigative tools used by institutions to the identification of actual needs, gaps, and hidden parts in the system and other activities. Through a comprehensive needs assessment process, an institution can establish its e-learning goals. Based on this view, a researcher made questionnaire was designed and validated by experts in teacher education, ICT and e-learning field. For reliability of the tool a pilot test was carried and the Alpha Cronbach value found .8980 and classified as having acceptable. Researcher tried to find out the most high and the lowest ranks in needs of students. Also gender, type of institutions on dependency to government financial aids, types of learning subjects as background variables were studied.

Keywords: E-Learning, Needs Assessment, Colleges of Education, Students

INTRODUCTION

Advances in information technology, coupled with the changes in society, are creating new paradigms for education and training. These massive changes have tremendous impact on our educational and training systems (Reigeluth & Khan, 1994). To stay viable in this global competitive market, providers of education and training must develop efficient and effective learning systems to meet the society's needs. Higher education sector can take greatest advantage of the increased use of technology, especially the Internet, in delivering the educational product. Distance learning via the Internet will drive tremendous growth (Cappelli, 2003). Usage of new technologies, Internet and e-learning in higher education especially in teacher education programs, can increase speed of development, and educate citizen familiar with ICT and needs of living in 21century. The present study is a survey type involving descriptive research among students of colleges of education. The study includes analyzing and evaluation of needs on e-learning system's components from point view of students of colleges of education affiliated by University of Mysore, India.

E-LEARNING

E-learning concept has been around for decades and is one of the most significant recent developments in the Information Systems (IS) industry (Wang, 2003).

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E-learning has been viewed as synonymous with Web-based learning (WBL), Internet-based training (IBT), advanced distributed learning (APL), Web-based instruction (WBI), online learning (OL) and open/flexible learning (OFL) (Khan, 2001). E-learning system is implemented through several ways however; the best practices among the various educational institutions have recommended developing Web-based learning management system (LMS).

E-learning, or electronic learning, has been defined a number of different ways in the literature. In general, e-learning is the expression broadly used to describe "Instructional content or learning experience delivered or enabled by electronic technologies" (Ong, Lai and Wang, 2004).Some definitions of e-learning are more restrictive than this one, for example limiting e-learning to content delivery via the Internet (Jones, 2003). The broader definition can include the use of the Internet, intranets/extranets, audio- and videotape, satellite broadcast, interactive TV, and CD-ROM, not only for content delivery, but also for interaction among participants (Industry Canada, 2001). More recently, this definition can be further expanded to include Mobile and wireless learning applications (Kinshuk, Suhonen, Sutinen, and Goh, 2003; Lehner, Nösekabel and Lehmann, 2003).

To begin a discussion a general definition of e-learning many researchers in the field of Integrating ICT in educational settings have attempted to define this concept. Liaw, Huang, and Chen (2007) define e-learning as the convergence of technology and learning, and as the use of network technologies to facilitate learning anytime, anywhere. Davis (2001) has also been defined e-learning as technology-enabled learning that covers various concepts, or a phenomenon delivering instructions through technology. Welsh, Wan berg, Brown, and Simmering (2003, p.246) define e-learning as the use of computer network technology through the Internet to deliver information and instruction to learners. Rosenberg (2001) refers to e-learning as using Internet technologies to deliver various solutions to learners. Holmes and Gardner (2006) point out that e-learning provide access to resources that promotes learning on an anyplace, anytime basis. E-learning is simply defined as a delivery of course content via electronic media such as Internet, Intranet, Extranet, satellite broadcast, audio/video tapes, interactive TV and CD ROMs.(Urdan and Weggen, 2000).

However, the most well-known definition that educators agree on is that e-learning is set of synchronous and Asynchronous instruction delivered to learners over technology (Colvin & Mayer, 2008). E-learning encompasses related terms like online learning, virtual learning, Web-based learning, and distance learning (Panda & Mishra, 2007).
Obringer (2001) mentioned that the history of e-learning goes back to 1983 when Nova Southern University in Fort Lauderdale, Florida, offered online courses to students for credit, and since then, schools have made a serious move toward the implementation of e-learning into curricula. In 2005, nearly 32.2 million students took at least one e-learning course (Lin, Lin, & Laffey, 2008).

In general, e-learning is the future of learning that focuses on both the individual needs of learners as well as the delivered content (Colvin & Mayer, 2008).

Given the variety of definitions of e-learning, it is difficult to estimate the size of the market. However, e-learning is believed to be the fastest growing sub-sector of the $2.3T USD global education market, with the market for online higher education expected to grow to $69B USD by 2015 (Hezel Associates, 2005).

There are many reasons for the growth of the higher education e-learning industry, both from the institutions' and students' perspectives. Globally, the demand for post secondary education is increasing. For example, in the United States, college enrolment among high school graduates increased from 56% in 1980 to 67% in 2003 (Morrison, 2003). With the limited capacity of existing classrooms at academic institutions and the prohibitive cost of building new facilities, e-learning is an attractive alternative (Werbach, 2000). According to Kleiman (2004), "e-learning can contribute to addressing each challenge by enhancing the preparation of new teachers, providing high quality and readily accessible professional development opportunities for active teachers, and making the teaching profession more attractive (e.g., by providing online resources for teachers and new Connections to colleagues and mentors) to help address the teacher recruitment and retention problem".

E-LEARNING COMPONENTS

However Khan (2001) pointed out that; an e-learning program in terms of various components and features that can be conducive to learning. Components are integral parts of an e-learning system. Features are characteristics of an e-learning program contributed by those components. Components, individually and jointly, can contribute to one or more features. Khan (2005) has organized e-learning components into seven categories;

> - Instructional Design (ID)
> - Multimedia Component
> - Internet Tools
> - Computers and Storage Devices
> - Connections and Service Providers
> - Authoring/Management Programs, Enterprise Resource Planning (ERP) Software, and Standards
> - Server and Related Applications

NEEDS ASSESSMENT

Mitchell (1993) describes needs assessment/analysis as "an examination of the existing need for training within an organization". It identifies performance areas or programs within an organization where training should be applied. A needs analysis identifies the problem or need and then proceeds to identify the aims, content, implementation, target population and outcome of an intervention (Cohen, Manion and Morrison, 2007).

Needs assessments have occurred in various settings including community organizations (Rahtz & Sirgy, 2000; Torma, 1998), government agencies (Holton, Bates, Naquin, 2000; Noll & O'Dell, 1997) and health care facilities (Thorton, 1995; Barry, Doherty, Hope, Sixsmith, Kelleher, 2000; Lockwood & Marshall, 1999) as well as education institutions (McCaslin&Lave, 1976; Stabb, Harris, Talley, Buhrke, Etzel, Hinkle, Pinkey, Prieto, 1995). In higher education, the needs assessment process appears in several contexts. This process has been applied to distance education, to various student organizations or faculty work groups (Bishop, Bauer, Becker, 1998; Kruse, Elacque, Rapaport, 1998). Witkin (1984) utilized a general definition of needs assessment namely that any systematic approach used in setting priorities for future action constitutes needs assessment.

Kaufman (1985) contends, in a specific way, that needs assessment focuses on the identification and justification of gaps in results and the manner in which these gaps are prioritized for attention. The results of the needs assessment will be an important part of the information used in decision-making about training, but it will not be the only information used. Needs assessment is one of the main investigative tools used by institutions to the identification of actual needs, gaps, and hidden parts in the system and other activities. Needs analysis can help institutions to match the needs of their target audience with the e-learning courses and programs they plan to market. Any institution venturing into e-learning should conduct a needs assessment survey to find out its expected customers' (i.e., learners') willingness to enrol in its e-learning courses.

Needs analysis will help institutions analyze the short-term and long term needs for their e-learning initiatives, and in turn will be instrumental in developing their e-learning strategies. Needs analysis can also provide information about the technological and other support services needed for their e-learning initiatives. Through a comprehensive needs assessment process, an institution can establish its e-learning goals (Khan, 2005).

One Year Bachelor of Education (B.Ed.) Programme

The Bachelor of Education programme, generally known as B.Ed., is a professional course that prepares teachers for upper primary or middle level (classes VI-VIII), secondary (classes IX-X) and senior secondary (classes XI-XII) levels. This programme is offered by teacher training colleges which mainly designed to prepare effective secondary school teachers. The programme essentially aims at providing the student teachers an insight into the educational scenario in the world with a specific reference to India. NCTE (The National Council for Teacher Education) prescribed minimum percentage of marks for admission as 45% in qualifying examination The duration of study for B.Ed. degree is extend over a period of one academic year as a regular course of not less than 180 working days which at least 40 days shall be for practice teaching in about ten schools at upper primary / secondary / senior secondary level. The medium of instruction and examination in B.Ed. programme is in Kannada or English.

NEED AND SIGNIFICANT OF THE STUDY

The present research is among the first efforts to determine the needs analysis of e-learning among students of colleges of teacher education. The results of this study will significant for several reasons.

Teachers play a very important role in a student's life. It is, to a great extent, the teachers who decide the shape a student's life will take. So, it is very necessary to be adequately equipped with resources that will make the teacher a perfect role model to the students. To achieve this, Bachelor of Education or B.Ed. was introduced, which will teach a person about teaching and the various aspects associated with teaching. Once a person completes the Bachelor of Education (B. Ed) coaching or training, then he is awarded with a B. Ed. degree.

Curriculum, administration, and assessment are all affected as members of the educational community experience changes in communication and commerce that are a result of the explosive expansion of the Internet (Austin & Mahlman, 2001). Thus, many educators are looking at the way ICT and Internet-based learning can provide flexibility and convenience. Internet-based learning can overcome some traditional barriers such as time and place.

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A student can study independently online or take an instructor-led online class, which combines the benefits of self study with those of more traditional classroom based learning (Ryan, 2001). For working adults occupying an increasingly large percentage of our college population, and with greater numbers of students having computer and Internet experience prior to entering college, opportunities are being made to better meet their needs, interests, and work schedules through online classes(Cooper, 2001). As university-level technology education programs begin to offer more online classes and degree programs, technology education professors may be in the position of developing online offerings (Flowers, 2001).

Technological advancement has been the major inspiration for change, beginning with the integration of radio broadcasting in the 1920's (Huynh, Umesh and Valachich, 2003). More recently, the advent of the Internet has enabled tremendous innovation in the delivery of post secondary education (Gunasekaran, McNeil and Shaul, 2002; Teo and Gay, 2006). As time goes by, more and more people gain access to the Internet, the cost of computer ownership decreases, and overall computer literacy increases (Huynh et al., 2003).

These trends provide educational institutions an ideal channel for the delivery of educational content. Integrating of e-learning technology in education and having skilled faculties and students as future teachers should be an integral part of the Teacher Training colleges' curriculum to developing in IT and Knowledge based societies.

Having a clear profile of needs analysis on e-learning components of students (as future teachers) of colleges of education provides vital information about situation of colleges of education. Through a comprehensive needs assessment process, an institution can establish its e-learning goals. The findings of the study would facilitate the process of decision-making and planning of usage and implementation of e-learning in teacher education colleges. Clarifying potential differences or similarities on gender, type of institution, and type of subject would show a mirror with a full feature of selected sample and finally population of B.Ed. colleges in the area and even in state level. Therefore, according to the previous researchers studied by the researcher about the possibility of previous studies in assessing needs of e-learning in teacher training level, with confidence and certainty it can be said that; this research project was the first one in the field around the state and even the country.

According to the advantages of using e-learning, importance of having basic information on B.Ed. colleges mentioned in the above paragraphs; conducting this study was not only essential but indispensable and vital to planning for development and preparing teacher education to entering the ICT world and information & knowledge based society.

REVIEW IF RELATED LITURATURE

A survey study was undertaken to analyze the needs assessment in Open and Distance Learning (ODL) Glasgow (2011) found the existence of a relationship (correlation) between program choice and level of educational attainment. Respondents with the highest qualifications opted for the academic programs while those with lower qualifications selected technical, vocational and skill based programs. However, respondents with the lowest qualifications (incomplete primary/secondary education and ODL certification) were the ones who selected literacy courses.

Ailing Qiao & Nan Wang (2009) explored in their study that the majority of respondents were required to learn computing skills on web design software, Learning Management System, and electronic resources for teaching only a few needed to learn basic computing skills such as e-mail and Internet. A more important issue was that respondents wanted to learn how to integrate ICT in classroom teaching effectively and efficiently.

Omwenga (2004) carried out a needs assessment of five Universities in East Africa in order to determine their state of readiness to embrace ICT and educational technology. He reported on students' access to computer facilities, the percentage of staff with computers in the offices; the networking of computers in the faculties of science and engineering, nature of link with the Internet, general computer literacy of staff and students and factors that affect the use of ICT as an educational technology. This work determined in each university the resources (both human and material) required to enable the institution to use ICT as an educational technology; indicates the resources required for each level of use of ICT as an educational technology and the level of within classroom interaction, at the level of interaction within departments, faculty and campus and the level of interaction with the wider world.

Martin, F., Klein, J. & Igoe, A. (2003) reported of the needs assessment conducted among the current graduate students, past graduate students (professionals) and faculty of Arizona State University to find their views on the course "Instructional Media Design" being offered online. Findings indicated that only 14% of the participants preferred a totally online setting for the course, more than 60% preferred a blended approach of online and classroom based learning.

The review of related literature has enabled to find widely accepted definitions of key terms and the variables used in the study. As it is clear from the comprehensive literature review which was mentioned in this part, just a few researchers worked on the e-learning needs assessing in higher educational level especially in teacher training colleges, while the present study was going to shed some light on the students, different subjects of studies in colleges, comparing institutional types of colleges with reference to their financial in/dependency on governmental supports.

In the review of the literature, extant studies regarding awareness, perceptions & attitudes, gender differences address these issues, but remain inadequate to address Teacher Education in e-learning needs.

METHODOLOGY

The objective of this study was to investigate:

To study the differences between/among the following categories of Students with reference to their e-Learning system components needs :

> ➢ Male and female students,
> ➢ Government, aided an unaided colleges students and
> ➢ Science, Art and Languages subjects students

H_0. There is no significant difference between/among the following categories of students with reference to their e-Learning system components needs

> ➢ **Male and female students**
> ➢ **Government, aided and un-aided colleges students**
> ➢ **Science, Art and Languages subjects students**

LOCATION OF THE STUDY

The locale of the present study is colleges of education which are affiliated by University of Mysore, Karnataka state in India. There are totally 194 colleges Affiliated by University. Numbers of Education Colleges is 35 which have been distributed in different districts such as Mysore city, Mandiya, Kollegal, Acetate Town and Hassan. Details of selected colleges have been mentioned in sample part.

SAMPLE

Determining an effective sample size is not an easy matter. Krejcie and Morgan (1970), quoted in Cavana, Delahaye, and Sekaran (2000), greatly simplified the sample size decision by providing a table which ensures a good decision model. According to Krejcie and Morgan's table, the optimal (effective and valid) sample size to represent students' population of 3500 is 346. This calculation of sample size agrees with Wimmer and Dominick's calculation (2005) at 95% confidence and 5% margin of error. To gather sufficient variables/factors and to allow for the substantial sample size needed to provide an overview of needs assessment of e-learning, the survey method was clearly the most suitable approach. In particular, surveys are especially suitable when there is a need to study a large number of variables and to manage a large sample size (Galliers, 1991). Using surveys to obtain a broad perspective across a large number of organizations is a technique which has also been used successfully by other researchers undertaking studies. The survey approach, therefore, appeared to be the most appropriate approach for this research project. To this end, data were collected by means of paper-based questionnaires – the surveys were designed and randomly distributed to students studying, in colleges of education affiliated by University of Mysore. All the Students, who were in educational colleges affiliated to University of Mysore, constituted the population of the present study. Sample size was calculated according to the table provided by Morgan and Corgis.

TOOl OF the STUDY

Needs assessment is a form of applied research and furnishes information applicable to the solution of real problems (Powell, 1997). According to Westbrook (1997) qualitative research yields results that "centres on understanding rather than on predicting" (p. 144). Needs assessments are usually qualitative in nature, although some quantitative data may be collected for demographic purposes. Examples of qualitative data would be feelings, thoughts and ideas. Examples of quantitative data obtained in the needs assessment would be age, area of residence, academic level, and gender.There are several data collection methods, including four primary varieties of data collection: surveys, focus groups, individual interviews, and the Delphi technique. Each of these varieties of data collection has unique aspects. With regarding of situation of targeted teacher training colleges of Mysore University and limitations of research and consulting with experts in the field and specialist, appropriate method was selected. In the present study, the researcher used a researcher made test to measure e-learning components of the e-Learning for students. Needs assessment questionnaire for students has two divisions:

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Part A: Demographic Information
Part B: Needs on e-Learning system components

Demographic Information was included in four parts:

> ➢ **Gender: Male / Female**
> ➢ **Working experience (only for Faculties)**
> ➢ **Type of institution: Government/Private Aided / Private Unaided**
> ➢ **Subject taught: Science /Art / Languages**

Second Division of the tool was on finding out needs e-learning system components. How much a student needs to know about e-learning components?

> ➢ **Instructional Design (ID)**
> ➢ **Multimedia Component**
> ➢ **Internet Tools**
> ➢ **Computers and Storage Devices**
> ➢ **Connections and Service Providers**

E-learning components based on Khan (2005) had seven categories, but after validity and reliability of the tool, last two categories of that model was omitted, since they were so technical and difficult and were not understandable for students, so only above five category were analyzed. Scoring for each item starts with minimum needs for learning (<25%) and maximum needs on learning; (100%).

VALIDITY AND RELIABILITY OF THE TOOL

The tool was in English language but it was translated to Kannada language (local language of the Karnataka state) to being more understandable and easy answering. Before piloting, to check on face and content validity as well as the construct for the items in the instrument, the tool scanned and reviewed with the help of eight experts who know both English and Kannada languages and were involved in the field of education, Higher education, ICT and e-leaning.

A pilot test was carried out to determine the reliability of the items representing the construct being measured, and the Alpha Cronbach value found for the pilot test was .8980 for the questioner.

As for the Alpha Cronbach value of the items for the construct was classified as having acceptable reliability. According to the Alpha Cronbach Reliability Classification Index, these values are classified as acceptable and therefore no changes were made to the items (Pallant 2002; Sekaran 2003; Kamarul Azmi Jasmi, 2010).

The survey took 24 weeks to complete from June to December 2012. The questionnaire returned by the participants was checked for any incomplete answers.

PASW Statistics 18 software was used to analyze the data. The results were analyzed and interpreted using the statistical techniques of independent samples t test, one way ANOWA, Duncan.

FINDINGS

A total of 374 students were selected through stratified random sampling of which 143 students were males (38.2%) and remaining 231 (61.8%) were females. Of the 374 students selected, 28 of them were studying in government college, 72 of them were studying in private aided colleges and a large majority of 274 of them were studying in private unaided colleges. Further, contingency coefficient test revealed a significant association between gender type and college type (CC=.151; P=.013), indicating more number of male students in private unaided colleges compared to government and private aided colleges, where we find more of female students. Of the 374 sample students selected, majority of them were from arts stream (53.7%), followed by 24.3% of them were from language and remaining 21.9% of them were from science stream. When contingency coefficient test was applied to see the association between subjects and type of institute, a significant association was observed (CC=.177; P=.016), where it was found that more number of language students were from government college compared to more number of students from arts stream in private aided and private unaided colleges.

In the following table: ranking of students in e-learning components needs was delineated.

Table: 1
Descriptive Statistics Needs on learning e-learning components ranking (students)

Needs on learning e-learning components		Mean	Rank
Instructional Design (ID)	Learning theories	3.46	15
	Instructional theories	3.50	14
	Instructional Strategies and techniques	3.56	11
Multimedia Component	Text	3.63	2.5
	Graphics	3.56	12
	Audio & (e.g., Real Audio, QuickTime)	3.59	8
	Video Streaming	3.63	2.5
	Links (e.g., Hypertext links, Hypermedia links, 3-D links, image maps, etc)	3.61	6
Internet Tools	Asynchronous	3.63	4
	Synchronous	3.62	5
		3.57	10
	Internet Navigation Tools	3.65	1
	Search Tools & Engines	3.60	7
Computers and Storage Devices	Operating Systems (Unix, Windows, Macintosh, Linux)	3.44	16
	Hard drives, CD ROMs, DVDs, and so on	3.54	13
	Tablets, iPods	3.58	9
Connections and Service Providers	Mobile technology(e.g., connected wireless, wireless LAN, WAN, PAN or personal area network)	3.39	17

When the needs on learning e-learning components were ranked, it was observed that Navigation under Internet tools ranked 1, followed by Video streaming and text under Multimedia components ranked 2.5 each, and The least raking Needs on learning e-learning components were Instructional theories (rank 17), Mobile technology (rank 16), Asynchronous (rank 15) and Hard drives, CD ROMs, DVDs, and Asynchronous under Internet tools again ranked 4.

The least priorities were given to Mobile technology under Connections and service providers (rank 17), Operating systems under computer and storage devices (rank 16), Learning theories under Instructional design (rank 15) and Instructional theories under Instructional design (rank 14).

H_0. There is no significant difference between/among the following categories of Students with reference to their e-Learning system components needs

H_0a. Male and female students

Table: 2
Mean e-learning system components needs scores of male and female students and results of independent samples 't' test

Gender	N	Mean	S.D	t value	P value
Male	143	61.13	11.83		
Female	231	60.21	11.31		
				.751	.453

Note: NS-Non-significant at 0.05 levels

Between male and female students, a non-significant difference existed in their mean e-learning needs as the observed t value of .751 was found to be non-significant (P=.453). Further, the mean values clearly revealed that male (mean 61.13) and female (mean 60.21) students had statistically equal scores on e-learning needs.

H_0b. Government, aided and un-aided colleges students

Table: 3
Mean e-learning components system needs scores of students studying in different types of colleges and results of one way ANOVA

Type of Institution	N	Mean	S.D value	F value	P
Government	28	64.78	10.51		
Private-Aided	72	60.51	10.81		
Private-Unaided	274	60.14	11.72		
Total	374	60.56	11.50	2.077	.127

Note: NS-Non-significant at 0.05 level.

One way ANOVA revealed a non-significant difference in mean e-learning needs of the students studying in different types of colleges. F value of 2.077 was found to be non-significant with probability value of .127. The mean e learning need scores of the students studying in government, private aided and private unaided colleges were 64.78, 60.51 and 60.14 respectively, which were statistically same.

H₀c. Science, Art and Languages subjects students

<p style="text-align:center">Table: 4
Mean e-learning system components need scores of students
in different streams and results of one way ANOVA</p>

Teaching subjects	N	Mean	S.D	F value	P value
Science	82	59.20	12.49		
Arts	201	61.40	10.99		
Languages	91	59.93	11.66		
Total	374	60.56 11.50		1.242	.290

Note: NS-Non-significant at 0.05 level.

Students studying different subjects did not differ significantly in their e-learning needs as the obtained F value of 1.242 failed to reach the significance level criterion of .05 (P=.290. The mean e-learning needs of the students studying science, arts and languages were 59.20, 61.40 and 59.93 respectively, which were statistically same contributed for the non-significant F value.

DISCUSSION AND CCONCLUSION

The purposes of this investigation was to find out needs of e-learning components and examine how certain demographic variables (male and female, type of institution, teaching-learning subject,) affect e-learning needs assessment among students in colleges of education or secondary level (B.Ed.) colleges affiliated by University of Mysore.

When the Needs on learning e-learning components were ranked for students it was observed that Navigation under Internet tools ranked 1, followed by Video streaming and text under Multimedia components ranked 2.5 each, and The least raking Needs on learning e-learning components were Instructional theories rank 17, Mobile technology rank 16, Asynchronous. The least priorities were given to Mobile technology under Connections and service providers rank 17, Operating systems under Computer and storage devices rank 16, Learning theories under Instructional design rank 15.

In needs to learning e-learning components system between male and female students, there was a non-significant difference. To studying in different types of colleges (Government/ private aided/private unaided) had not a non-significant difference in mean of e-learning components needs for the students. To studying in different subjects (science/art/language) had not a non-significant difference in mean of e-learning components needs for the students. Findings of this study support Ailing Qiao & Nan Wang (2009).

They showed that the majority of respondents were required to learn web design software, Learning Management System, and electronic resources e-mail and Internet.

Instructional Design (ID) had medium ranking in needs of our samples which in Ailing study the pedagogy for integrating classroom teaching and online learning had a high priority in teacher training in ICT.

Based on the findings of this study, students, faculty members and management of Colleges of education and educators can plan and conduct needed and related training programmes to expand their own knowledge and proficiency in e-learning, Internet technologies and lead to more efficient utilization. Moreover, students (as future teachers) should be made aware of the potential of various e-learning technologies for enhancing the teaching and learning process. Clarification of the incentives and elimination of obstacles to fully integrate e-learning is needed. This study, while obviously focused on the one year B.Ed. college program experience, also has potential benefit to other teacher training colleges like high schools, D.Ed. and B.P. Ed. Colleges or even PG educational colleges and departments in M.A and M. Phil. Level. Decision makers and Heads can decide for the planning and designing workshops and intensive courses. It is offered institutions to plan and conduct some non-credit courses to improve students' acceptance of e-learning and intensive workshops or courses to faculties.

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REFERENCES

Ailing Q. & Nan Wang (2009). An Investigation of Teachers' Needs on Using ICT in Teaching and Learning. *2009 International Conference on Computer Engineering and Applications IPCSIT vol.2 (2011) © (2011) IACSIT Press, Singapore*

Austin, J. T., & Mahlman, R. A. (2000). *Using the Internet for career - technical assessment: A pilot project in Ohio*. Retrieved January 25, 2012, from http://scholar.lib.vt.edu/ejournals/JCTE/v16n2/austin.html

Badrul, H. Khan (2005). E-Learning Quick Checklist. Hershey, PA: Information Science Publishing. Retrieved on 2011-11-12, from: http://BooksToRead.com/checklist

Badrul, H. K. (2001). Managing E-Learning: Design, Delivery, Implementation and Evaluation .George Washington University, USA

Barry, M. M., Doherty, A., Hope, A., Sixsmith, J., Kelleher, C. C. (2000). A community needs assessment for rural mental health promotion. *Health Education Research, 15,* 293-304.

Bishop, J., Bauer, K., & Becker, E. (1998). A survey of counseling needs of male and female college students. *Journal of College Student Development, 39*, 205-210.

Cappelli, G. (2003). E-learning in the postsecondary education market: A view from Wall Street. In M. S. Pittinsky (Eds.), *The wired tower: Perspectives on the impact of the Internet on higher education* (pp. 41-63). Upper Saddle River, NJ: Prentice Hall.

Cavana, R., Delahaye, B., & Sekaran, U. (2000). *Applied Business Research: Qualitative and Quantitative Methods*. USA: John Wiley & Sons Inc.
Cohen, L., Manion, L., & Morrison, K. (2007) *Research Methods in Education*, 6th edition. London: Routledge.

Colvin, R., Mayer, R. (2008). *E-learning and the science of instruction*. California: John Wiley.

Cooper, L. W. (2001). A comparison of online and traditional computer applications classes. *THE Journal*, 28(8), 52-58.

Davis, S. (2001, January 1). What E-Learning Can Learn from History. *USDLA Journal, 15*(10). (ERIC Document Reproduction Service No. EJ641496) Retrieved September 21, 2012, from ERIC database.

Galliers, R. D. (1991) "Strategic Information Systems Planning", *European Journal of Information Systems,* 1 (1), pp. 55-64.

Flowers, J. (2001). Online learning needs in technology education. *Journal of Technology Education*, 13(1), 17-30.

Glasgow, Francis (2011). Needs Assessment in Open and Distance Learning (ODL): Case of the Institute of Distance and Continuing Education (IDCE), University of Guyana. *Indian Journal of Open Learning,* 2011, 20(1), 15-30 ISSN 0971-2690, Printed in India, © Indira Gandhi National Open University

Gunasekaran, A. Ronald D. McNeil, Dennis Shaul, (2002) "E-learning: research and applications", Industrial and Commercial Training, Vol. 34 Iss: 2, pp.44 – 53

Gunawardena, C., Nolla, A. Wilson, P. Lopez-Islas, J. Ramirez-Angel, N. Megchun-Alpizar, R.(2001). *Journal: Distance Education - DISTANCE EDUC* , vol. 22, no. 1, pp. 85-121, 2001

Hezel Associates, "Global E-learning Opportunity for U.S. *Higher Education," vol*. 2006: Hezel Associates, LLC, 2005.

Holmes, B. & Gardner, J. (2006). *E-learning: Concepts and practice.* Great Britain: Sage Publications.

Holton, E. F., III, Bates, R. A., Naquin, S. S. (2000). Large-scale performance- driven training needs assessment: Acase study. *Public Personnel Management, 29*, 249-267.

Huynh, Minh Q.; Umesh, U.N.; and Valacich, Joseph S. (2003) "E-Learning as an Emerging Entrepreneurial Enterprise in Universities and Firms," *Communications of the Association for Information Systems*: Vol. 12, Article 3. Retrieved 2012-5-4 from: http://aisel.aisnet.org/cais/vol12/iss1/3

Jones, A.J. (2003). ICT and Future Teachers: Are we preparing for e-Learning? *IFIP Working Groups 3.1 and 3.3 Conference: ICT and the Teacher of the Future*, Melbourne, Australia.

Kamarul Azmi b. Jasmi. (2010). *Guru cemerlang pendidikan Islam sekolah menengahdi Malaysia: satu kajian kes.* PhD Thesis, Malaysia National University.

Kleiman, G. M. (2004). Meeting the Need for High Quality Teachers: e-Learning Solutions, White Paper, Retrieved on 2011-5-8 From http://www.ed.gov/about/offices/list/os/technology/plan/2004/site/documents/Kleiman- eetingtheNeed.pdf

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research   activities. *Educational and Psychological Measurement, 30*, 607-610.

Kruse, B. G., Elacqua, T. C., & Rapaport, R. J. (1998). Classroom accommodations for students with disabilities: A needs assessment. *Journal of College Student Development, 39,* 296-298.

Lehner, F., Nösekabel, H., & Lehmann, H. (2003). Wireless e-learning and communication environment. In Z. Maamar, W. Mansoor, and W.-J. van den Heuvel (Eds.), *Proceedings of the Workshop at ISMIS '02*, Lyon.

Liaw, S., Huang, H., & Chen, G. (2007, December 1). Surveying Instructor and Learner Attitudes toward E-Learning. *Computers & Education, 49*(4), 1066-1080. (ERIC Document Reproduction Service No. EJ773936) Retrieved2010-11-11, from ERIC database.

Lin, Y. M., Lin, G. Y., & Laffey, J. M. (2008) Building a social and motivational framework for understanding satisfaction in online learning. *Journal of Educational Computing Research, 38*(1), 1-27.

Lockwood, A., & Marshall, M. (1999). Can a standardized needs assessment be used to improve the care of people with severe mental disorders? A pilot study of 'needs feedback.' *Journal of Advanced Nursing, 30*, 1408-1415.

Martin, F., Klein,J., & Igoe, A. (2003, November). Teaching Instructional Media Design: A Needs Assessment Report. Proceeding of E-learn 2003, Phoenix, AZ.

McCaslin, N. L. & Lave, J. (1976). *Needs Assessment and Career Education: An Approach for States*. Columbus: Centre for Vocational Education, Ohio State University.

Mitchell, G. (1993). The Trainer's Handbook, The AMA Guide to Effective Training, 2nd Edit. AMACOM, NY, 423 pp.

Morrison, J. (2003). U.S. Higher Education in Transition. On the Horizon, 11(1), 6-10.

Noll, P. F., & O'Dell, W. (1997). Florida's affordable housing needs assessment methodology. *Journal of the American Planning Association*, *63*, 495-508.

Obringer, L. (2001). *How e-learning works*. Retrieved 2012-10-03, from http://communication.howstuffworks.com/elearning.htm

Omwenga, Elijah,(2004). *A Training Needs Assessment Study on the use of Information and Communications Technologies (ICT) in supporting the provision of Science and Engineering Education in Five East African Universities*. Retrieved 2012-5-6 from: http://webmail.fandm.edu/Session/2067200dal35cnfox0Uw6venHilgjfwj/MessagePart/inbox/607902B/Needs%20Assessment%20report%20Oct04.pdf

Ong, C. S., Lai, J.Y., & Wang, Y. S. (2004). Factors Affecting Engineers' Acceptance of Asynchronous E-learning Systems in High-Tech Companies. *Information and Management*, 41 (6), 795-804, p.01.

Pallant, J. (2002). *SPSS survival manual*. Sydney: Ligare Sydney.

Panda, S., & Mishra, S. (2007). E-Learning in a mega open university: Faculty attitudes, barriers, and motivation. *Educational Media International, 44 (4),* 323-338.

Powell, R. R. (1997). *Basic Research Methods for Librarians* (3rd ed.). Greenwich, CT: Ablex Publishing.

Rahtz, D. R. & Sirgy, M. J. (2000). Marketing of health care within a community: A quality-of-life needs assessment model and method. *Journal of Business Research*, *48*, 165-176.

Reigeluth, C.M. & Khan, B.H. (1994). Do instructional systems design (ISD) and educational systems design (ESD) really need each other? Paper presented at the *Annual Meeting of the Association for Educational Communications and Technology (AECT)*, Nashville, TN, February.

Rosenberg, Marc. J. (2001). *E-learning: Strategies for delivering knowledge in the digital age.* Boston: McGraw-Hill Professional.

Ryan, S. (2001). Is online learning right for you? *American Agent & Broker*, 73(6), 54-58.

Teo, C.B., & Gay, R.K.L. (2006). A Knowledge-Driven Model to Personalize e-Learning. *ACM Journal of Educational Resources in Computing, 6* (1), 1-15.

Sekaran, U. (2003). *Research methods for business: A skill building approach (4th ed.)*. New York: John Wiley & Sons.

Stabb,S. Harris, M. Joseph, E. Talley,. Harold, E. Robin, A. Buhrke, E, F. Etzel, J. Hinkle,S. Pinkey,J. Prieto,S. (1995)Multicultural needs assessment for college and university student populations. Retrieved 2012-5-6 from http://www.copyrightencyclopedia.com/the-clinical-use-and-interpretation-of-the-wechsler-4/#ixzz2GjRsma84

Thornton, P. M. (1995). Linking market research to strategic planning. *Nursing Homes Long Term Care Management*, *44*, 34-36. *Jerabek, McMain, and Van Roekel 59*

Torma, C. (1998). Youth recreation needs assessment, Albuquerque. *Planning*, *64*, 14.

Urdan, T. A., & Weggen, C. (2000). Corporate E-learning: Exploring a New Frontier: Wrhambrecht+co.

285

Wang, Y. (2003). Assessment of learner satisfaction with asynchronous electronic learning systems. *Information & Management, 41*(1), 75–86.

Werbach, K. (2000). Clicks and Mortar Meets Cap and Gown: Higher Education Goes Online. *Release 1.0, 18* (8), 1-22.

Welsh, E., Wanberg, C., Brown, K. and Simmering, M. (2003), E-learning: emerging uses, empirical results and future directions. *International Journal of Training and Development, 7*(4), 245-258.

Westbrook, L. (1997). Qualitative Research. In R. R. Powell, *Basic Research Methods for Librarians* (3rd ed.) (pp. 143-162). Greenwich, CT: Ablex Publishing.

Wimmer, R., & Dominick, J. (2005). Sample size calculator. *Mass Media Research: An Introduction (8th Edition)*. CA: Thomson Wadsworth. Retrieved 2012-06-12 from **http://www.rogerwimmer.com/mmr/samplesizecalculator.htm**

Witkin, B. R. (1984). Assessing Needs in Educational and Social Programmes. San Francisco: Josey-Bass.