

Assessment the E-Learning Needs of Faculty Members of the Higher Education Institutions

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Abstract: The present investigation aimed to assess the E-Learning of teachers of Government Degree Colleges of Bundelkhand Region of Uttar Pradesh. For the purpose 20 teachers from government degree college of Bundelkhand Region of Uttar Pradesh were selected. A self-made tool “E-Learning Need Questionnaire” was used for collection of the data. Result showed that the teachers have no need to know about Learning Theories, Instructional Theories, Instructional Strategies and Techniques, Text, Graphics, Audio Streaming, Video Streaming and Links, Asynchronous, Synchronous, Internet Navigation Tools and Search Tools & Engines, Operating Systems, Hard drives, CD ROMs, DVDs, Tablets and iPad. 90% teachers have medium or low level of Knowledge about e-Skills. Only on E-mail, Chat and Search, Participant’s Current Level of Knowledge is high.

Keywords: E-Learning, E-Skills, E-Learning system components needs, Current level knowledge on e-skills.

1. 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, can increase speed of development, and educate citizen familiar with ICT and needs of living in 21st century.

According to Kleiman, “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” (Kleiman, 2004).

E-learning will provide faculty members extra teaching tools such as multimedia, chat rooms, and the flexibility of delivering materials from anywhere and anytime. E-learning will help educators to engage students in a communication process that will give remarkable feedback related to the course materials whether or not the materials need improvements (Colvin & Mayer, 2008).

Understanding the needs and readiness of users is paramount to the success of any e-learning programme. Implementing e-learning by educational institutions has strong benefits, one of which is that e-learning provides consistent content that assists students to overcome problems involved with instructors different teaching styles. Another benefit of an e-learning course is that self paced learning allows students to skip material they already know and move onto the next topic (Lewis, 2007). The third benefit of an e-learning course is that the course materials are uploaded to the server, which allows instructors and the technical support team to easily update and manage the materials (Lewis, 2007). A fourth benefit is offering students the freedom of learning anytime and anywhere.

Using new technology in teaching will make students more capable of working on their own to collect information from variety of sources besides the instructor, and in this way, e-learning will create a competitive learning environment (Gotthardt, Siegert, Schlieck, Schneider, Kinnert, Gross, et al., 2006).

E-learning is considered the appropriate solution to the call for a just-in-time accessible, ubiquitous approach to providing learning at a lower cost (Borotis & Poulymenakou, 2004). The ability of the Internet to make learning possible regardless of geographic location or time of day has made WBI (Web-based instruction) a very attractive recruiting and retention tool for colleges and universities worldwide (Williams, 2008).

Therefore, according to the previous researchers studied by the researcher about the possibility of previous studies in assessing needs and implementation of e-learning in teacher training level, with confidence and certainty it can be said that; this research is 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 govt. colleges mentioned in the above paragraphs; conducting this study is 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.

2. OBJECTIVES OF THE STUDY

1. To assess the e-learning needs of Faculty Members (Teachers) with reference to their e-Learning system components needs.
2. To assess the e-learning needs of Faculty Members (Teachers) with reference to their Current level knowledge on e-skills.

3. METHOD OF THE STUDY

The researcher employed the “**Descriptive Survey method**”.

4. VARIABLES OF THE STUDY

I. Criterion Variable

E-learning Needs

II. Independent Variables

1. e-Learning system components needs
2. Current level knowledge on e-skills

5. SAMPLE OF THE STUDY

As the locale of the study is Bundelkhand Region, the five government degree college from this region will be selected by using “purposive sampling method”. All Teachers of government degree college of Uttar Pradesh constituted the population of the present study. Sample size will be considered based on the number of colleges and teachers, So 25 teachers were chosen for the study, using “purposive sampling method”.

6. TOOL USED FOR DATA COLLECTION

The self-made tool “E-Learning Need Questionnaire” was used for collection of the data.

7. RESULT AND DISCUSSION

ASSESSMENT OF THE E-LEARNING NEEDS OF FACULTY MEMBERS WITH REFERENCE TO THEIR E-LEARNING SYSTEM COMPONENTS NEEDS

One of the objectives of the study was “assessment of the e-learning needs of Faculty Members (Teachers) with reference to their e-Learning system components needs.” For this purpose frequency and percent responses of the teachers of government degree colleges in the area of e-Learning system components needs are presented in the following table-1

Table1: Frequency and percent responses in the area of e-Learning system components needs

E-Learning Components		Response									
		How much do You need to Know about E-Learning Components?									
		<25%		>25%		>50%		>75%		100%	
		f	%	f	%	f	%	f	%	f	%
Instructional Design (ID)	Learning Theories	6	25.00	12	50.00	2	8.33	2	8.33	2	8.33
	Instructional Theories	4	16.67	8	33.33	6	25.00	4	16.67	2	8.33
	Instructional Strategies and Techniques	4	16.67	10	41.67	4	16.67	4	16.67	2	8.33
Multimedia Component	Text	0	0.00	14	58.33	6	25.00	2	8.33	2	8.33
	Graphics	4	16.67	8	33.33	6	25.00	4	16.67	2	8.33
	Audio Streaming (e.g., Real Audio)	2	8.33	14	58.33	6	25.00	0	0.00	2	8.33
	Video Streaming (e.g. QuickTime)	2	8.33	12	50.00	4	16.67	4	16.67	2	8.33
	Links (e.g., Hyper text links, Hyper media links, 3-D links, image maps)	4	16.67	10	41.67	4	16.67	4	16.67	2	8.33
Internet Tools	Asynchronous: (E-mail, Newsgroups)	2	8.33	10	41.67	6	25.00	2	8.33	4	16.67
	Synchronous: Text-based (Chat, messaging, etc.)	0	0.00	14	58.33	4	16.67	2	8.33	4	16.67
	Synchronous: Audio-video conferencing tools.	0	0.00	10	41.67	10	41.67	2	8.33	2	8.33
	Internet Navigation Tools (Access to data bases & Web document)	2	8.33	10	41.67	6	25.00	4	16.67	2	8.33
	Search Tools & Engines	0	0.00	8	33.33	8	33.33	6	25.00	2	8.33
Computers and Storage Devices	Operating Systems (Unix, Windows, Macintosh, Linux)	4	16.67	8	33.33	6	25.00	6	25.00	0	0.00
	Hard drives, CD ROMs, DVDs, and so on	2	8.33	6	25.00	8	33.33	4	16.67	4	16.67
	Tablets, iPad	2	8.33	6	25.00	8	33.33	6	25.00	2	8.33
Connections and Service Providers	Mobile technology (e.g., connected wireless, wireless LAN, wireless WAN, wireless PAN or personal area network)	4	16.67	4	16.67	6	25.00	6	25.00	4	16.67

The obtained results shown in the above table clearly depicts that -

1. The frequency and percent responses for the question 'How much do You need to Know about Instructional Design (ID)?' revealed that on the whole almost 75% teachers respond on alternate >25% or <25%. It means 75% teachers have no need to know about Learning Theories, Instructional Theories, Instructional Strategies and Techniques.
2. When responses were elicited for the question 'How much do you need to know about Multimedia Component?' 80% of the respondents indicated '> 50%'. It means 80% teachers have no need to know about Text, Graphics, Audio Streaming, Video Streaming and Links.

3. The frequency and percent responses for the question ‘How much do You need to Know about Internet Tools?’ revealed that on the whole almost 50% teachers no need to know about Asynchronous, Synchronous, Internet Navigation Tools and Search Tools & Engines.
4. When responses were elicited for the question ‘How much do you need to know about Computers and Storage Devices?’ 60% of the respondents indicated ‘> 50%’. It means 60% teachers have no need to know about Operating Systems, Hard drives, CD ROMs, DVDs, Tablets and *iPad*.
5. The frequency and percent responses for the question ‘How much do You need to Know about Connections and Service Providers?’ revealed that on the whole almost 70% teachers no need to know about Mobile technology (e.g., connected wireless, wireless LAN, wireless WAN, wireless PAN or personal area network).

Ranking of E-learning Needs of the teachers of government degree colleges are presented in the following table-2

Table 2: Ranking of E-learning Needs and E-skills Knowledge

e-Learning components		MEAN	RANK
Instructional Design (ID)	Learning Theories	3.3133	8
	Instructional Theories	3.1024	17
	Instructional Strategies and Techniques	3.3311	6
Multimedia com Component	Text	3.3313	5
	Graphics	3.2892	9
	Audio Streaming (e.g., Real Audio)	3.4639	2
	Video Streaming (e.g. QuickTime)	3.4940	1
	Links (e.g., Hypertext links, Hypermedia links, 3-D links, image maps, etc.)	3.2289	11
Internet Tools	Asynchronous: (E-mail, Newsgroups)	3.1325	15
	Synchronous: Text-based (e.g., Chat, messaging, etc.)	3.3193	7
	Synchronous: Audio-video conferencing tools.	3.2771	10
	Internet Navigation Tools (Access to databases and Web documents.)	3.4277	3
	Search Tools & Engines	3.1988	12
Computers and Storage Devices	Operating Systems (Unix, Windows, Macintosh, Linux)	3.1627	13
	Hard drives, CD ROMs, DVDs, and so on	3.1446	14
	Tablets, <i>iPad</i>	3.4036	4
Connections and Service Providers	Mobile technology (e.g., connected wireless, wireless LAN, wireless WAN, wireless PAN or personal area network)	3.1265	16

When the needs on e-learning components were ranked for faculties it was observed that Video Streaming under multimedia component ranked 1, followed by Audio ranked 2 under multimedia component, Internet navigation tools ranked 3 under Internet tools and Tablets, iPods under computer and Storage devices ranked 4. The least ranking needs on e-learning components were Instructional theories (rank 17), Mobile technology (rank 16), Asynchronous (rank 15) and hard drives, CD ROMs, DVDs, and so on under Computer storage devices (rank 14).

ASSESSMENT OF THE E-LEARNING NEEDS OF FACULTY MEMBERS WITH REFERENCE TO THEIR CURRENT LEVEL KNOWLEDGE ON E-SKILLS

One of the objectives of the study was “assessment of the e-learning needs of Faculty Members (Teachers) with reference to their current level knowledge on E-skill.” For this purpose frequency and percent responses of the teachers of government degree colleges in the area of current level knowledge on E-skill needs are presented in the following table 3 and 4.

Table3: Frequency and percent responses in the area of current level knowledge on E-skill

Participant's Current Level of Knowledge, e-Skills and Needs		Your Current Level With This Technology					
		Low		Medium		High	
		f	%	f	%	f	%
1	Word Processing	6	25.00	16	66.67	2	8.33
2	Spread Sheets (Excel)	12	50.00	10	41.67	2	8.33
3	Data Bases (Access)	10	41.67	14	58.33	0	0.00
4	Email	0	0.00	8	33.33	16	66.67
5	Chat	0	0.00	10	41.67	14	58.33
6	PowerPoint	4	16.67	10	41.67	10	41.67
7	Search	0	0.00	10	41.67	14	58.33
8	Graphic Software	12	50.00	10	41.67	2	8.33
9	Scanners	4	16.67	12	50.00	8	33.33
10	Digital Cameras	6	25.00	14	58.33	4	16.67
11	Statistical Software	8	33.33	12	50.00	4	16.67
12	Web Browsers	4	16.67	10	41.67	10	41.67
13	LMS (Learning Management System)	8	33.33	10	41.67	6	25.00
14	LCMS (Learning Content Management System)	8	33.33	10	41.67	6	25.00

Table 4: Frequency and percent responses in the area of current level knowledge on E-skill

Participant's Current Level of Knowledge, e-Skills and Needs		How much do You need to Know about this (program / application / software)?									
		<25%		>25%		>50%		>75%		100%	
		f	%	f	%	f	%	f	%	f	%
1	Word Processing	6	25.00	6	25.00	8	33.33	0	0.00	4	16.67
2	Spread Sheets (Excel)	6	25.00	2	8.33	10	41.67	2	8.33	4	16.67
3	Data Bases (Access)	6	25.00	6	25.00	10	41.67	0	0.00	2	8.33
4	Email	8	33.33	6	25.00	2	8.33	2	8.33	6	25.00
5	Chat	8	33.33	6	25.00	4	16.67	2	8.33	4	16.67
6	PowerPoint	8	33.33	6	25.00	2	8.33	2	8.33	6	25.00
7	Search	4	16.67	8	33.33	4	16.67	2	8.33	6	25.00
8	Graphic Software	4	16.67	6	25.00	6	25.00	6	25.00	2	8.33
9	Scanners	4	16.67	8	33.33	6	25.00	0	0.00	6	25.00
10	Digital Cameras	4	16.67	6	25.00	10	41.67	0	0.00	4	16.67
11	Statistical Software	8	33.33	6	25.00	6	25.00	0	0.00	4	16.67
12	Web Browsers	4	16.67	8	33.33	4	16.67	4	16.67	4	16.67
13	LMS (Learning Management System)	6	25.00	10	41.67	0	0.00	2	8.33	6	25.00
14	LCMS (Learning Content Management System)	8	33.33	8	33.33	4	16.67	2	8.33	2	8.33

When responses were elicited for the question 'Your Current Level With This Technology?' almost 90% of the respondents indicated medium or low level on Word Processing, Spread Sheets (Excel), Data Bases (Access), Graphic Software, Scanners, Digital Cameras, Statistical Software, Web Browsers, LMS (Learning Management System), LCMS (Learning Content Management System), It means 90% teachers have medium or low level of Knowledge about e-Skills. Only on E-mail, Chat and Search, Participant's Current Level of Knowledge is high.

Ranking of Current level knowledge on e-skills of the teachers of government degree colleges are presented in the following table 5

Table 5: Ranking of Current level knowledge on e-skills

	E-Skills	MEAN	RANK
1	Word Processing	1.8916	4
2	Spread Sheets (Excel)	1.6325	7
3	Data Bases (Access)	1.5602	8
4	Email	2.0602	2
5	Chat	1.8072	5
6	PowerPoint	1.9699	3
7	Search	2.0783	1
8	Graphic Software	1.4819	10.5
9	Scanners	1.5542	9
10	Digital Cameras	1.3735	14
11	Statistical Software	1.4819	10.5
12	Web Browsers	1.6988	6
13	LMS (Learning Management System)	1.4277	12
14	LCMS (Learning Content Management System)	1.3976	13

Among current e-skills knowledge, maximum knowledge observed for Search (rank 1), followed by Email (rank 2), PowerPoint (rank 3), and Word proceeding were observed,, where minimum knowledge was found for LCMS (rank 13), LMS (rank 12), Graphic software and Digital cameras (ranks 10.5 each).

8. CONCLUSION

On the basis of the point of view of teachers of the government degree colleges of Bundelkhand region, it can be concluded that the teachers have no need to know about Learning Theories, Instructional Theories, Instructional Strategies and Techniques, Text, Graphics, Audio Streaming, Video Streaming and Links, Asynchronous, Synchronous, Internet Navigation Tools and Search Tools & Engines, Operating Systems, Hard drives, CD ROMs, DVDs, Tablets and *iPad*. 90% teachers have medium or low level of Knowledge about e-Skills. Only on E-mail, Chat and Search, Participant's Current Level of Knowledge is high.

9. VEDUCATIONAL IMPLICATIONS

This study was conducted to Assessment of E-Learning needs among Faculty members of Government Degree Colleges of Bundelkhand Region. The findings from this study provided empirical confirmation of the theory and research reported in the assessing and ranking of e-learning, e-skills knowledge, and content readiness of teachers in government degree colleges which its results indicated the following educational implications:

1. Based on the findings of this study, faculty members and principals of Colleges and educators can plan and conduct needed and related training programmes to expand their own knowledge and proficiency in computer knowledge, e-skills, e-learning and Internet technologies and lead to more efficient utilization.
2. Moreover, students (as future teachers) and faculties 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.
3. Learning style is an individual's natural or habitual pattern of acquiring and processing information in learning situations. A core concept is that individuals differ in how they learn. Learning style in traditional learning was more important in e-learning because distance between learner and instructor may be more than hundreds of kilometres, and there is no face to face interaction, especially in offline mode. Instructor should assess and know learning style of his/her learner ad provide appropriate material in e-learning approach.

4. It can be said that tools and findings of this study are also potentially is beneficial to other teacher training colleges like D.Ed. colleges, PG educational colleges, B.P. Ed. Colleges (and, possibly, even more widely), as they explore the use of e-learning technology in new teaching and learning environments.
5. The findings of the present research could be employed as a trigger by Heads of university and colleges to pay more attention to the e-learning concept, because pace of changing out of schools and colleges is terribly fast and educational system remain behind digital world caravan.
6. The findings in the present dissertation could also give students, faculties and Heads a better idea of them so that they could be encouraged to take measure that would diminish their weakness in e-learning components and e-skills knowledge.
7. Pedagogically, the results obtained in this research could function as an influential element in enhancing the overall quality of education and updating of real level of students and faculty members' needs and knowledge about using e-learning system in colleges.
8. Findings will motivate decision makers, educators and principals of Degree colleges to pay more attention to rethink and consider the situation of their own institute readiness for implementing new technologies and e-learning system regarding the variables analyzed in this research. Based on the findings of this study and according to ranking in needs of e-learning and e-skills knowledge, 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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