Survey-Analysis

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UNDERSTANDING STUDENTS' PERCEPTIONS IN USING E-LEARNING PORTAL AS KNOWLEDGE MANAGEMENT TOOL: A STUDY ON IIM, SHILLONG

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ABSTRACT:

Purpose – The study aims to analyse the utilization of e-learning portal as knowledge management tool in an academic set-up.

Design/methodology/approach – A self administered questionnaire was distributed among the randomly selected 100 students of IIM Shillong.

Findings – This research paper introduces e-learning portal and knowledge management and their relationship. The study shows that all the respondents are very much interested in using the e-learning portal of their institute and quite a good number of the respondents are participating in that portal. Of course, the awareness level of the respondents regarding the utilization of e-learning portal as knowledge management tool is comparatively low.

Paper type – Case Study

Keywords: E-learning; Knowledge Management; Portal; E-learning Portal; IIM Shillong

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1. INTRODUCTION

E-Learning is now very common in the world of education. In the simplest term e-learning is the use of technology in the teaching learning process. It enables people to learn anytime and anywhere. It is borderless. The increasing access to information and communications technology, as well its decreasing cost has created the path of e-learning more smoother. Now teachers are increasingly using information and communications technologies to support their teaching. Moreover, the present-day students who have grown up using information and communications technology are also interested to learn in an electronic environment. Similarly, academic institutions also have seen advantages in making their programs accessible via a range of distributed locations, including on-campus, home and other community learning or resource centres (Naidu, 2006). Thus, e-learning is getting popularity day-by day among the academic fraternity.

1.1 Knowledge Management

Knowledge Management (KM) is the most powerful means for any organizational success. It is a management attitude, which unites streamline information management with the culture of organizational learning spirit. Knowledge management needs a systematic approach to develop the evolution of knowledge into a key organizational resource. Most importantly, effective knowledge management is now acknowledged as the key driver of new knowledge and ideas. Therefore, knowledge management has become a significant issue in all type of organizations across the world irrespective of profit-making or not-for-profit organizations. Academic institutions can also follow knowledge management practices to support every part of their goal. An institution's wide approach to knowledge management can direct enormous improvements in creation and sharing of knowledge within the academic fraternity. In fact, the greatest knowledge creators are the academics. Knowledge creation is best performed by universities or higher academic institutions. Therefore, the application of knowledge management philosophy in academic sector is as important as it is in the corporate sector.

Knowledge management is a debatable term. Therefore, it is difficult to find a well accepted definition of knowledge management. Different scientists have defined it in different perspectives. Some of the popular definitions are tabulated in Table 1.

Author(s)	Yr	Definitions of Knowledge Management
Skyrme	1997	KM is the explicit and systematic management of vital knowledge and comprises processes of creating, gathering, organizing, diffusing, using, and exploiting (Skyrmie, 1999).
Broadbent	1998	KM is about enhancing the use of organizational knowledge through sound practices of information management and organizational learning (Broadbent, 1998).
Knapp	1998	KM is the art of transforming information and intellectual assets into enduring value for an organization's clients and its people (Knapp, 1998).
Newman	1999	KM is the collection of processes that govern the creation, dissemination and utilization of knowledge in an organization (Newman and Conrad, 1999).
Quintas	1999	KM enables the creation, communication, and application of all kinds of knowledge to achieve business goals (Quintas, Lefrere, and Jones, 1997).
Tiwana	2000	Management of organizational knowledge for creating business values and generating a competitive advantage (Tiwana, 2000).
Darroch	2003	KM is the process that creates or locates knowledge and manages the sharing, dissemination, and use of knowledge within the organization (Darroch, 2003).
Ron Young	2005	KM enables individuals, teams, organizations, and communities more collectively and systematically to capture, store, share, and apply their knowledge to achieve their objectives (Young, 2005).
Park	2006	Identification and sharing of the required knowledge that is controlled and protected, and fulfilling the organizational objectives (Park and Kim, 2006).

Table 1: Definitions of Knowledge Management (KM)

Indeed, managing the knowledge effectively with the processes of identification, creation, sharing, and storage and the utilization of organizational knowledge to improve the abilities of the human resources and to enhance their productivity, and competitive excellence is what knowledge management.

1.2 Portal as a KM Tool

A portal is a website or web service for a specific community. It provides a variety of services including search engines, directories, subject gateways, news, e-mails, chat rooms etc. It allows building a community and finding links to other web resources of common interest (Pienaar, 2003). Portals have evolved to provide a customized gateway to web information. Their idea is to offer everything under one roof. Similarly, Strauss (2003) defines portal as a special kind of gateway to web resources—"a hub from which users can locate all the web content they commonly need". Moreover, a portal is user-centric, while a home page is owner-centric. There are many kinds of portals in the current electronic environment. Based on their function, we can group portals into five primary categories as, Internet Portals, Application Portals, Enterprise Information Portals, Information Management Portals, and Horizontal/Vertical Portals.

Introduction of the portal concept to the academic institutions has opened new possibilities to address some of the issues concerning the management of academic information and knowledge. Similarly, e-learning portal is also becoming an important and popular application in higher education. E-learning portal provides a number of learning tools, including a course content management, a course calendar, an online discussion board, information announcement, reviews, auto-marked quizzes and exams, grade maintenance and distribution, student progress tracking, navigation tools, access control, online assignment, electronic mail, chat room etc. In the words of Al-Sadi et al. (2008), "E-learning system provides intercommunication facilities to specific topics as well as collaboration with experts and other users on various topics". They further expressed that, an e-learning portal is the platform which provides the facility of interaction among knowledge holders and seekers. Therefore, e-learning portal can be combined with the processes of knowledge management. Through e-learning portal knowledge can be store, update and share which can act as an active knowledge sharing and store system.

2. RESEARCH QUESTIONS

The study is motivated with the following research questions –
- What are the features of the e-learning portal and to what extent these are used by the students?
- Do students find the portal important for their academic purposes?
- Does the portal support electronic scholarly communication?
- What are students' perceptions in using e-learning portal?

3. OBJECTIVE OF THE STUDY

To find out students' perceptions on the effective utilization of E-learning portal as knowledge management tool in an academic environment.

4. METHODOLOGY

A total number of 275 students of IIM Shillong are the total population of this study. For the survey of the primary data questionnaire method was adopted. For that a questionnaire was prepared on the basis of the existing literature and was distributed among the randomly selected 100 students of Indian Institute of Management, Shillong.

The data were tabulated for analysis in accordance to the objective of the study. The study has received 100% response rate. Some respondents furnished some valuable comments in the space provided for the purpose; those comments were incorporated in the appropriate places.

5. KNOWLEDGE MANAGEMENT AT IIM SHILLONG

The Rajiv Gandhi Indian Institute of Management, known as (IIM-Shillong), is the 7th IIM of India, located in Shillong, Meghalaya. It was established in 2008. The e-portal of IIM-Shillong is an intranet portal which is a gateway that unifies access to all information and applications. It is a one stop shop for all information needs of the IIM-Shillong community. Management of data, applications and information is much easier with its presence. It was developed by the Computer Centre of the institute in 2009. Under the portal, there are the enterprise resource planning application run with Oracle, the web conferencing platform run with OpenMeetings, the learning management system run with Moodle, the IIMS Wiki, the Library portal run with VTSL Virtua, the IIMS News and event. It allows one point access and the feature of searching of information across it. The home page of the IIM-Shillong portal is shown in Fig. 1
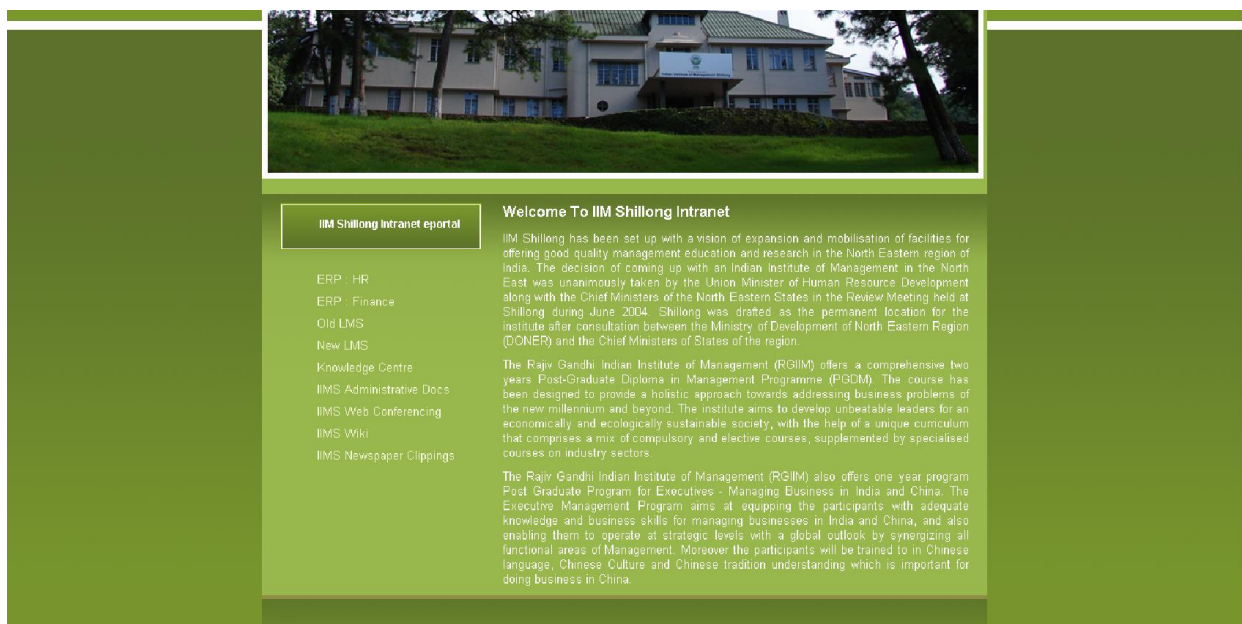
Fig. 1: Home page of the IIM-S Portal

5.1 The e-Learning Portal

The e-learning portal of IIM-Shillong is based on Moodle 2.4. It facilitates course management using its different modules – course, assignment, chat-room, calendar, task, discussion board, online test, message, glossary, quiz, survey and so on. In addition, each course is provided with its own portal, allowing the participants to download the resources at leisure, anytime and from anywhere. These portals also allow and encourage participants to carry on discussions on various topics of interest. Thus it is extending learning process across the available 24 hours. Fig 2 is showing the course categories on the e-learning portal of IIM-Shillong.
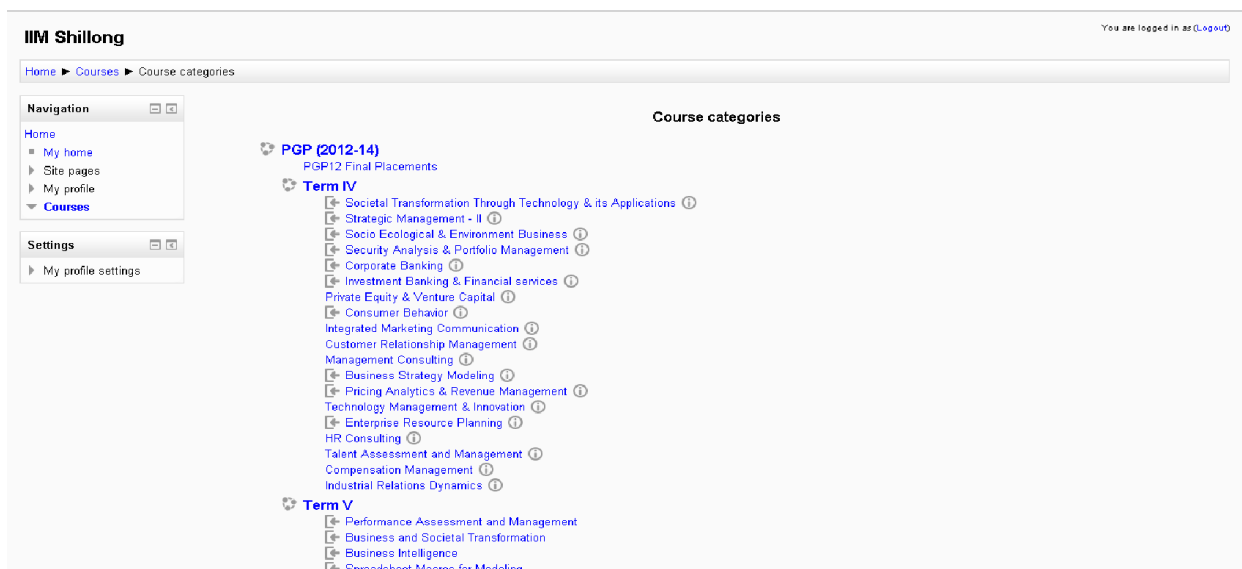

Fig. 2: Course Categories on the e-Learning Portal

6. DATA ANALYSIS

6.1 Basic Information of the Respondents

The Table 2 furnished below gives a brief account on the basic information of the respondents of the study. Here it is seen that out of 100 respondents 76 are male and 24 are female. Similarly out of 100 respondents 62come under 20 to 25 age group, 28 come under 26 to 30 age group and others are of above 30 years. Moreover, all the respondents are having e-mail account.

Respondents	Male (76)	Female (24)	
Age Group	20-25 yrs (62)	26-30 yrs(28)	30+ (10)

Table 2: Basic Information of the Respondents
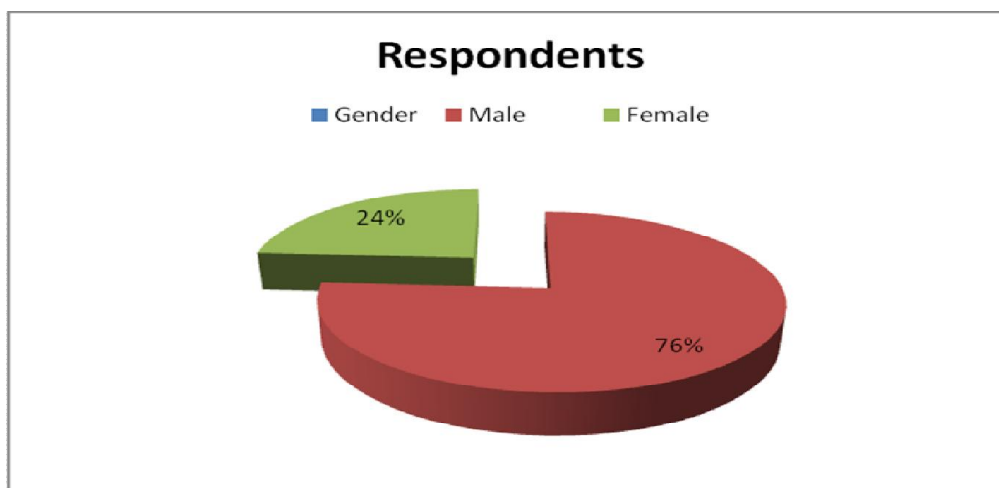
6.2 General Understanding and Usage of E-Learning Portal

In this section, a descriptive statistical analysis is given in order to provide a richer understanding of the students' general understanding and usage of e-Learning Portal. Here in table 3 it is found that all the respondents use computer and web technology for their study. Similarly, all the respondents claimed to be familiar about the term 'e-learning' as well as 'e-learning portal'. Moreover, all the respondents are aware about the e-learning portal of their institute. Ofcourse, no respondent has received training on the use of the e-learning portal. Again, majority of the respondents replied that the portal supports in their academic activities and it enables them to access all the collections in one place and to search across them. Moreover all the respondents admitted that the portal supports electronic scholarly communication and it connects people with common interests who work in different departments. Again, majority of the respondents have replied that they can add information to the portal. Of course, respondents are not informed through their mobile phone regarding the current news in their areas of interest.

General Understanding and Usage of E-Learning Portal	Yes	No	No Response
i. Use of computer applications	100%	-	-
ii. Use the Web in academic activities	100%	-	-
iii. Familiarity with e-Learning	100%	-	-
iv. Familiarity with e-Learning Portal	100%	-	-
v. Awareness of institutional e-Learning Portal	100%	-	-
vi. Training on the use of that Portal	-	78%	22%
vii. Important for academic purposes	83%	-	17%
viii. Accessibility of collections in one platform	97%	-	3%
ix. Support in electronic scholarly communication	93%	-	7%
x. Connecting people with common interests	100%	-	-
xi. Users ability to add information to the portal	96%	-	4%
xii. Mobile alerts to the users	-	92%	8%

Table 3: General Understanding and Usage of E-Learning Portal

6.3 Features of the E-Learning Portal and their Use

In addition to studying the e-learning portal more closely, this study also has tried to find the features and functionality of the e-learning portal that students tend to use. As can be seen in table 4, students use the e-learning portal mostly for obtaining course information, announcements, old question papers and online testing/quiz. Moreover, majority of the respondents use it to participate in the discussion forum as well as in the chatroom.

Features of the Portal (FP)	Never Use	Rarely Use	Sometimes Use	Use	Often Use
FP1: Course Information	-	7%	24%	66%	3%
FP2: Announcements	-	8%	20%	39%	33%
FP3:Calendar	-	20%	62%	10%	8%
FP4: Online Study Materials	-	21%	54%	19%	6%
FP5: Discussion Forum	-	7%	34%	51%	8%
FP6: Old Question Papers	-	3%	5%	25%	67%
FP7: News Forum	-	74%	8%	14%	4%
FP8: Chatroom	-	19%	71%	8%	2%
FP9: Online Testing/Quiz	-	17%	14%	63%	6%
FP10: Online Tutorials	-	11%	13%	71%	5%
FP 11: Virtual Classroom	-	10%	22%	54%	14%
FP13: Messages	-	6%	20%	33%	41%
FP14: Online Help	-	28%	32%	32%	8%

Table 4: Features of the Portal (FP)

6.4 STUDENTS' PERCEPTIONS IN USING E-LEARNING PORTAL

6.4.1 Performance Expectancy

A descriptive statistical analysis is described in this section in order to provide a richer understanding of the students' perceptions in using the e-learning portal. Table 5 summarizes the percentages of the students' perceptions with respect to Performance Expectancy. As can be seen that the majority of the students tend to believe that the portal is a useful and productive tool; it enables them to accomplish task more quickly; it increases their creativity. However, they tend to be a bit more

neutral in terms of their perception regarding getting a better grade by using the portal.

Performance Expectancy (PE)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
PE1: Usefulness of the Portal in studies	0%	0%	24%	64%	12%
PE2: Quickness in task accomplishment	0%	2%	16%	72%	10%
PE3: Increases in creativity	0%	0%	12%	84%	4%
PE4: Grade appreciation by virtue of the portal	3%	8%	68%	8%	13%

Table 5: Performance Expectancy (PE)

6.4.2 Effort Expectancy

Table 6 provides a descriptive analysis of the students' perceptions regarding Effort Expectancy. It appears that majority of the students are agreed that the e-learning portal requires minimum effort; as it is understandable, user friendly as well as it develops skill.

Effort Expectancy (EE)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
EE1: Understandability	-	-	12%	75%	13%
EE2: Skill Development	-	-	19%	73%	8%
EE3: User friendliness	-	-	11%	66%	23%

Table 6: Effort Expectancy (EE)

6.4.3 Attitude toward Using the Portal

The Table 7 reveals that majority of the students consider that the e-learning portal makes classes more interesting and understandable. Again, they think that learning with the portal is fun.

Attitude toward Using the Portal (A)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
A1: Learning with portal is interesting		-	10%	66%	24%
A2: Learning with portal is more understandable.	-	-	3%	78%	19%
A3: Learning with portal is fun	-	-	59%	37%	4%

Table 7: Attitude toward Using E-learning Portal (A)

6.4.4 Social Influence

Interestingly, the descriptive analysis in table 8 shows that students get influenced by others to use the e-learning portal. Majority of them are agreeing that the teachers, administrative staff and their friends support in the use of the portal. On the other hand, majority of them are disagreeing about their parents motivating them to use the portal.

Social Influence (SI)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
SI1: Teachers' supportiveness in using the portal	-	19%	39%	42%	-
SI2: Institution's supportiveness in using the portal.	-	16%	34%	50%	-
SI3: Influence by parents to use the portal	17%	56%	27%	-	-
SI4: Influence by friends to use the portal	-	5%	26%	69%	-

Table 8: Social Influence (SI)

6.4.5 Facilitating Conditions

The descriptive statistics in table 9 states the majority of the students' perception that they have the necessary resources and knowledge to use the e-learning portal. But they are disagreeing about the availability of specialized engagement for assistance with difficulties they experience with the portal.

Facilitating Conditions (FC)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
FC1: Necessary resources to use the portal	-	-	6%	67%	27%
FC2: Knowledge based use of the portal	-	-	12%	71%	17%
FC3: Non compatibility with other applications	66%	25%	9%	-	-
FC4: Specialised supports and assistance	-	34%	58%	-	-

Table 9: Facilitating Conditions (FC)

6.4.6 Anxiety

Today's techno-savvy students do not have a high level of anxiety while using the e-learning portal. Even though, a few of them have anxiety as stated in the table 10.

Anxiety (ANX)	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
ANX1: Uneasy to use	23%	54%	14%	9%	-
ANX2: Fear of losing of information	7%	53%	9%	31%	-
ANX3: Fear of making mistakes	32%	51%	7%	10%	-
ANX4: Hesitate to share knowledge	62%	33%	5%	-	-

Table 10: Anxiety (ANX)

6.5 NEED OF SPECIAL TRAINING ON THE PORTAL

Here quite a good number of respondents demanded to organize special training on the use of the e-learning portal. For that the institution should introduce special user education programme on the portal. It serves to instruct, inform and persuade the users about the benefits of the portal. Faculties should also be given proper training for self participation in the portal and they should be well informed about its importance in teaching and learning. Moreover, users should be motivated for using the portal as well as to participate in the portal. Some of the possible mechanisms for promotion and advocacy include- workshops, seminars and presentations, leaflets, posters, newsletters and other printed literature, library orientation programme, links from institutional home page, links from library web pages etc.

Need of Training	Yes	No	No Response
Percentage	88%	8%	4%

Table 11: Need of Special Training on the Portal

6.6 Rating of the E-Learning Portal

In table 12 respondents rate of satisfaction regarding the e-learning portal is displayed. Here

authors have made use of Likert scale ranged from Very Poor (1) to Very Good (5) for all items

associated with each variable.

Rating	Very Poor	Poor	Average	Good	Very Good	No Response
Percentage	-	-	12%	59%	19%	10%

Table12: Rating of the E-Learning Portal

Here, Out of 100 respondents, 19% have graded the portal as 'Very Good', 59% have remarked it as 'Good' and 12% have graded it as 'Average'.

7. FINDINGS

After due analysis of the data, the following major findings were drawn –

i.   83% of the respondents find the portal important for their academic purposes.
ii. 93% of the respondents have acknowledged that the portal supports electronic scholarly communication and it connects people with common interests.
iii. An average of 86% of the respondents is agree that the portal is understandable, user-friendly and also develops the skills.
iv. An average of 56% respondents gets influenced by teachers and friends to use the portal.
v.   An average of 79% of the respondents does not have anxiety of using the portal.

viii. 88% of the respondents have demanded to organize special training on the portal.

59%, 19% and 12% of the respondents have graded the portal as good, very good and average respectively; whereas, 10% of them have not given any response.

8. CONCLUSION

In this paper we have studied the use of an e-learning portal designed to help higher academic institution in the context of knowledge management processes. The e-learning portal of IIM Shillong, an integrated knowledge environment is working as a knowledge management initiative for the teachers and learners. Students and teachers can manage their knowledge on the portal very easily. It can be utilized as a tool for capturing teachers' explicit and tacit knowledge for knowledge sharing. It is found very user-friendly for collaborative learning. The e-learning portal of IIM Shillong is providing ways to display, publish and organize student-generated contents and thus it helps to move these knowledge to subsequent semester classes and other groups. It is also providing the sense of community, working togetherness, and joy of learning. It gives a platform to learn, create, share, help and improve. All the modules of the e-learning portal of IIM, Shillong is supporting knowledge management processes and organizational learning. Ofcourse, there is less participation is seen from the teachers' as well as students' ends. Therefore, the students are advised to make good use of these online e-learning resources to gain better understanding of the subjects matter and to facilitate better participation.

Limitations of the Study – The present study is limited to one institution only. Therefore, a further study is suggested including all the IIMs or higher academic institutions of India for getting a generalized finding. Moreover, usage among different age groups was also not studied. However, gender study was also not taken into account. Furthermore, the study will be appropriate by using an interview approach to place participants in a realistic environment where they will be able to

express the problems face during the use of the e-learning portal

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