Pakistan Journal of Distance & Online Learning
Volume: VI, Issue I, 2020, 221-230

Role of Knowledge Networks in Distance Learning

Muhammad Zaheer[1]

Abstract

This study is aimed at exploring the knowledge sharing methods adopted by the students in distance learning mode. Students studying in distance learning do not have formal/regular classes where they can go and have academic discussions. Though, this convenience of not attending the classes facilitates many but at the same time poses certain challenges as burden of knowledge acquisition shifts towards the student alone. This was a qualitative study using grounded theory methodology to know how students in distance learning share their academic problems and seek solution. A sample of twenty students was selected, through purposive sampling, from three universities of Pakistan. For data collection, semi-structured interviews were conducted. It was found that students create online groups/communities to help each other and overcome the absence of face to face interactions. Students opt for virtual interactions in order to share knowledge and information. Cell phones, emails, Facebook and student created websites/blogs were found to be the most frequently used Information and Communication Technology (ICT) media for knowledge sharing.

Keywords: Knowledge Networks, Distance Learning, ICT

[1]*Assistant Professor, Department of Management Sciences VUP*
Email: mzaheer@vu.edu.pk

Introduction

Distance learning is getting recognition and spreading all over the world. Institutions offering traditional classroom education have also opted for distance learning courses along with their traditional courses. Distance learning offers the benefits of low cost, wider access, learner's flexibility and shared resources. Students can study according to their own schedule and ease. For example, working students in particular manage their job and study quite easily which is one of the key benefits of distance learning. Though, correspondence courses are still in practice, but, with the advent of modern ICT online learning has surpassed traditional means of distance learning.

Apart from the benefits of flexibility, access and low cost students studying in distance learning do face some issues as well, they don't have formal/regular classes where they can go and discuss conceptual issues of different subjects with their peers. Though, this facility of not attending the classes facilitates many but at the same time poses certain challenges as burden of knowledge acquisition shifts towards the students. Students studying the same course are dispersed in wide geographical areas and may lack sense of emotional connectedness with each other and with their instructors.

Technological advancements have enabled students to remain connected via internet. Online learning got popularity and from correspondence courses we have now entered the era of mobile learning. Students have formed online communities, blogs and have adopted other means of communication to remain connected. They have created formal and informal knowledge networks. They discuss their assignments, exam issues and their academic problems that need attention.

Literature Review

Distance education has been defined by many authors and associations in their own way. Johnston (1997) defined distance education as "the bringing together of teachers, learners, information, resources and learning support systems in a place (real or virtual) beyond the confines of the host institution" (p.108). According to Siegel et al. (1998), distance learning is "a formal manner of teaching or instruction whereby the teacher and the learner are in separate locations most of the time" (p. 71). It is also defined as "a type of education where students work on their own at home or at the office and communicate with faculty and other students via e-mail, electronic forums, video

conferencing and other forms of computer-based communication" (http://webopedia.internet.com/TERM/d/distance_learning.html).

According to the United States Distance Learning Association, distance learning (DL) is "the acquisition of knowledge and skills through mediated information and instruction, encompassing all technologies and other forms of learning at a distance" (USDLA, 1998). Newby, Stepich, Lehman and Russell (2000) define distance learning as "an organized instructional program in which teacher and learners are physically separated (p. 210)." All these definitions have one thing in common i.e., "teachers and students are separated".

In distance education, burden of knowledge acquisition is borne by the learner in general. Distance education requires a persistent motivational effort on the part of the students. Segregated by the time and space, distance learner often feels alone; this loneliness is overcome by the community building (Eastmond, 1995). Distance learning is offered by two types of institutions: i) those who are basically traditional class room institutes and are offering distance courses for the sake of cost reduction and optimum resource utilization and ii) purely distance learning institutions offering all the courses in DL (Manoj, Goldkind, Heyman, & Cross-Denny, 2012). According to Manoj et.al (2012), most researchers believe that student concerns, instructor abilities and proficiencies, and availability of resources are the major impediments in distance education. Students prefer face to face live lecturing over any medium used (synchronous). It is also reported by many researchers that the choice of distance education was spurred by students' personal constraints like limited access, cost, or scheduling rather than content of the course. Whatever may be the reason of opting distance learning, once students are admitted in distance learning courses how do they make their virtual classroom look like a real one or how do they coordinate with each other (make a community)?

Brown (2001) in his study explored how students form their community while taking distance courses. This community may be taken as a networking of students for sharing their knowledge. Brown found that students' community in distance learning had three levels: at first level students make online friends, at second level they share long discussions and this stage was termed as community conferment and last level of community building was camaraderie which meant long-term relationship at personal level having frequent information exchanges. This level was the highest level of social connectedness of students. It was also found that new students were facing much difficulty in adjustment; they were facilitated and mentored by senior students termed as "veterans" (Brown,

2001). Brown explored 15 steps in community building of distance classes, these steps were tools (learning material), comfort level, self-assessment and judgment, similarities, needs met, time allotted, supportive interaction, substantive validation, acquaintances/friends, earning trust/respect, engagement, widen circle, community conferment, long term/personal communication, and Camaraderie. Each stage had its own peculiar characteristics. Last stage camaraderie is highest level of knowledge sharing in the specific network of virtual students.

Modern distance education is overwhelmingly via internet, though it started from correspondence courses using postal services for the delivery of learning material. Availability of internet, its speed and cost have been major impediments a decade ago, now distance education has been converted into online education. This has happened in three phases: Experimentation (1970s-1990s), innovation (1990s to 2000) and then systematization (Allen & Long, 2009). More importantly, internet has transformed the culture and society; what initially was a specialized thing used by limited persons has become everyday use thing and almost all people are now aware of it. As argued by Allen and Long (2009) future would be the internet learning and curriculum design and pedagogy would have to be internet oriented.

Students studying in distance learning make their social network and communities to share knowledge and information (Acar, 2008). According to Coyle and Vaughn (2008), "A social network is a configuration of people connected to one another through interpersonal means such as friendship, common interests, or ideas". According to Allen and Long (2009), "Knowledge networking involves knowledge work that is shared, distributed and fragmented."

According to Hayes, Ruschman and Walker (2009), frequently used social networking sites include MySpace, Facebook, LinkedIn, and Trip Advisor. A recent addition is Research Gate. Participants in these sites can facilitate communication with others by organizing online communities, opportunities for self-description and uploading content, and professional networking (Hayes et al., 2009). In their study Manoj et.al (2012) found four important themes autonomy, emotional connectedness, technological challenges and knowledge acquisition that affect distance learning.

Research Objectives

This paper is aimed at exploring how students in distance learning overcome issues of self- study?, how they are connected with each other?, and which ICTs resources play vital role in knowledge dissemination?.

Methodology

This was a qualitative study using grounded theory methodology, as prescribed by Glaser and Strauss (1967), to know how students in distance learning share their academic problems and seek solution. As this was an exploratory study, grounded theory best suited for this study. Data were collected form 20 respondents of 03 online/distance learning institutions of Pakistan by using semi structured interviews. Out of these 20 respondents 06 had completed their education from DL institutions and were working as faculty members. Rest 14 were studying. Out of these 14 respondents, 9 were working along with their studies and 05 were full time students. These respondents were selected by non-probability purposive sampling. Theoretical sampling guided the study to include all types of students i.e., working, full time students, currently studying and graduated students. Students from both rural and urban areas were contacted to include respondents from diverse areas. 12 face to face and 08 interviews using Skype were conducted. Semi-structured interviews were conducted with informed consent. To ensure the reliability and validity of the interviews, all participants were debriefed about the interview conducted and it was made sure that what author perceived was according to what was said by the respondents. 07 females and 13 males were interviewed.

Data Analysis

After each interview, data analysis was done. A large number of themes emerged initially which were then reduced by constant comparison method (Glaser & Strauss, 1967). Data saturation was achieved after 15 interviews; 05 more interviews were conducted to ensure data saturation.

Results

Data showed that students of DL institutions have formed strong networks and communities of communication, and modern ICT play a vital role in facilitating such networks and communities. Information and knowledge flow freely among students' networks. Due to infrastructure of the country, ICT divide between rural and urban students was visible. First university offers its BS computer science, BS information technology and MBA programs with classroom tutoring at its approved study centers, where classes are held regularly, and students attend these classes. Students of these programs had formed their groups and used to have maximum face to face communication with each other in the study centers.

Some of these students had also formed group at Google plus to share study material, they also use Skype group call for discussion on any specific study related issue. One student told, "I live in a village where high speed internet is not available; I with my friends have opted for a friends package offered by a renowned telecommunication service on my cell phone". Two respondents who had graduated in 2007 said, "we had no option other than cell phone service, as in our times, Facebook or other social media were not that popular". One student who was currently doing MBA from the same university told, "I use Facebook account, LinkedIn and Research gate to stay updated with latest developments." B.Ed (Bachelor of Education) program of the university does not offer classroom tutoring; a female student of B.Ed told, "I remain connected with my group mates via cell phone (package service), emails and Skype." Students discuss difficult topics, upcoming assignments and exams in their networks. It was found that students form heterogeneous groups, generally experts of different subjects make a diverse group to help out each other; interestingly gender was not a variable of interest, rather, expertise was major factor. For example, one student of MBA told, "we are 06 group members two are good in stats, one is expert of IT, two are good in accounting and one female who is MA English, good at writing skills." This group is depicted in figure 1; group knowledge is created by mutual interaction of these group members. For 1st semester students, this fourth stage of group development termed as "performing" is achieved till mid-term. Some of the groups adjourn after first semester depending upon the performance of individual group members.

Figure 1: Group Diversity and Knowledge Sharing

Second university is country's first ICT based online university; students of this university are naturally good at IT skills. 04 graduates of this university who had completed their education till 2007 were interviewed. One of them was IT graduate and others were business graduates. According to IT graduate, "in our times, social sites were at infancy, we used yahoo messenger, emails and cell phones to contact our group members and share study related material." Others used MSN messenger, email and cell phone for knowledge sharing activities. Most vibrant were the students who were currently studying in this university. Students/graduates of the second university were using ICT more than any other institution/ university because the university is purely ICT based online university. They used almost all means of communication with their groups. Students use email, Facebook, Twitter, Skype, My space, LinkedIn, Research Gate, WhatsApp, Mendeley and many other websites/communities/blogs which were developed by the students themselves. Assignments, graded discussions, projects, difficult lecture topics, and Mid & Final exams were the most discussed issues on these student forums. Students of this university have the option to be home based student or attach with a study center/campus. Students are provided video lectures on their Learning Management System (LMS), DVDs, TV channels and these lectures are also uploaded on YouTube as well. Students share their knowledge regarding these lectures on the communication mode of their own choice, home based or working students actively participate in these social networks for learning and information gathering. One MBA student explained, "I work in a pharmaceutical firm as accountant 08 hours daily and have limited time for studies, yet my classmates on our website (created by them) provide help in understanding certain problems and assignments". One female student shared, "Being female, it is not possible in my socio cultural background to have face to face interaction with male students; I use emails and Facebook for study purpose and get help from my male colleagues".

It was also found that students living in big cities like Lahore and Karachi, have better access to high speed internet and use social sites, Skype and WhatsApp video calls etc. on their smart phones and remain connected with their community / group. Students living in far areas were deprived of such facilities and problems exacerbate with grave energy crises in the country which affect villages at their maximum. One student told, "I use cell phone package, for discussion with my group members, we meet once a week at our study center where I go to submit

my assignments as due to absence of electricity I cannot frequently use our group website at home."

Third institute was conventional institute and has recently offered MS programs in distance learning mode. MS students were interviewed and it was found that these students were using face to face interaction at study centers more frequently than other two universities; they also shared information via cell phone and emails. One student who was working as lecturer in a university, told, "I go to study center on weekend and that is enough for me, I seldom contact any other student as I don't need any help."

Apart from forming a knowledge sharing group, an interesting thing was noted. A member in one group was not just stuck to one group, there was a chain of knowledge linkages. Group members were connected with other students due to one reason or another.

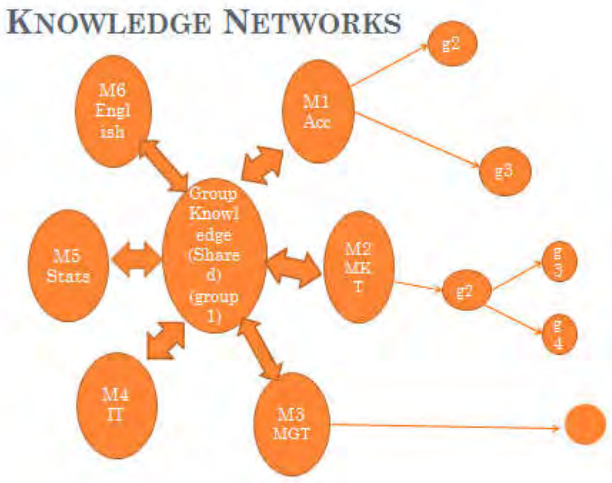

Figure 2: Knowledge Networks patterns

Two most commonly used media by students in forming and maintaining knowledge networks were mobile phone services and internet.

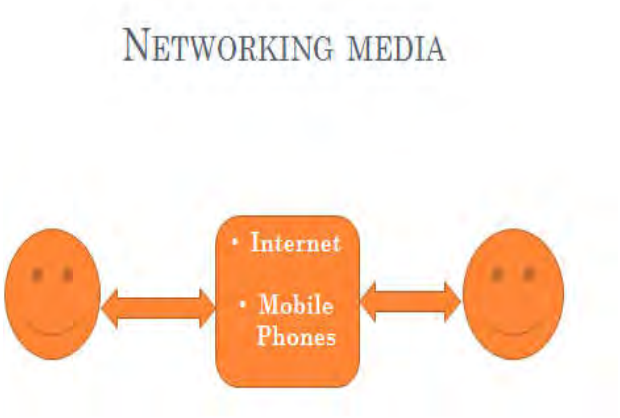

Figure 3: Networking Media Used

Conclusion

It has been found that students who are studying in distance learning and are not offered tutoring, develop communities and groups. These groups have face to face interaction as well as virtual interaction using ICT. Generally, these groups are formed in first semesters (group formation stages forming, storming, norming, performing & adjourning). Groups are formed in orientation sessions held at campuses where they meet physically or previous relation/friendship plays a role in group formation.

Cellular services, emails, social sites like Facebook, and services like Skype & WhatsApp are the most frequently used media for knowledge sharing and information dissemination. With the availability of high-speed internet, these virtual communities are growing. In remote areas where due to cultural pressures male-female interaction is not possible, females benefit from virtual links and are connected with knowledge networks.

References

Acar, A. (2008). Antecedents and consequences of online social networking behavior: The case of Facebook. *Journal of Website Promotion, 3*(1), 62–83.

Allen, M., & Long, J. (2009). Learning as Knowledge Networking: Conceptual Foundations for Revised Uses of the Internet in Higher Education. In S.I. Ao, C. Douglas, W.S. Grundfest & J. Burgstone (Eds.), *Proceedings of the World Congress on Engineering and Computer Science WCECS, Vol I* 2009, October 20-22, 2009 (pp. 652-657), San Francisco: Newswood.

Brown, Ruth E. (2001). The process of community-building in distance learning classes. *JALN, 5*(2), 18-35.

Coyle, C., & Vaughn, H. (2008). Social networking: Communication revolution or evolution. *Bell Labs Technical Journal, 13*(2), 13–18.

Eastmond, D. V. (1995). *Alone but together: Adult distance study through computer conferencing*. Cresskill, NJ: Hampton Press, Inc.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldire.

Hayes, J., Ruschman, D. & Walker, M.(2009). Social Networking as an Admission Tool: A Case Study in Success. *Journal of Marketing for Higher Education, 19*(2),109-124. DOI: 10.1080/08841240903423042

Johnston, Rita. (1997). Distance Learning: medium or message? *Journal of Further and Higher Education*, 21(1), 107-122.

Manoj,. P, M., Goldkind, L., Heyman, J & Cross-Denny, B. (2012). How Much Does the Distance in Distance Education Matter? Our Students Speak. *Social Work Education, 31*(4), 406–421.

Newby, T. J., Stepich, D. A., Lehman, J. D., & Russell, J. D. (2000). *Educational Technology for Teaching and Learning* (2nd ed.). Upper Saddle River, NJ: Merrill/Prentice-Hall

Siegel, E., Jennings, J., Conklin, J. & Napoletano, F. (1998). Distance learning in social work: results and implications of a national survey. *Journal of Social Work Education, 34*(1), 71–80.

Citation of this Article:
Zaheer, M. (2020). Role of Knowledge Networks in Distance Learning. *Pakistan Journal of Distance and Online Learning, 6*(1). 221-230.