

Fostering Interaction between Project Students and Supervisors in Distance Learning Mode

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Abstract

In distance learning, students and teachers are separated by time and space due to which they suffer problems with interaction. The students, particularly, who are employed face problems with interactions mostly. They had trouble communicating with the research supervisors due to their professional commitments. To address this issue with research projects students; Department of Psychology at Virtual University of Pakistan intervened and offered special interactive activities i.e., Adobe sessions and Skype calls for project students. Mentoring was provided to these working students to enhance their learning experience. The purpose of the study was to see how effective the guidance provided for working students had been after the addition of a rather realistic medium for communication (Skype, Adobe Connect,) in relation to students who pursued research projects earlier. Data was collected from 20 students using purposive sampling. Semi-structured interview was used for data collection and thematic analysis was applied. It was found that students faced problems interacting with their supervisors in earlier semesters however, it was found that students benefited with higher satisfaction, enhanced learning development and better communication when Skype was introduced as a medium for communication between the supervisor and the students.

Keywords: Interaction, Research Project, Medium of Communication.

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Introduction

In this modern era of technological advancements, people's lives have transformed holistically and one of the major transformations is in the domain of human interaction, which revolutionized the course of discourse completely. This does not require for a physical presence to be maintained but rather people break the boundaries through communication gadgets and other assistive tools. ICT information and communication technologies affect not only one-to-one communication but also one to many.

This digitalization benefits all segments of life like interactions that occur daily and are hence, casual in nature, educational institutes offer learning programs, organizations and business deals with other organizations and businesses etc. Education is mandatory for a society to thrive and maintain its civility. Not only the developed countries, but nations who are developing also have started to put their words to actions by working on E-learning institutes with the slogan that education is for all.

E-learning and/or distant learning emerges from the ICT and it refers to the conveying of teachings in a way where there's no physical presence of the instructor and the learner in the same space (Ferri, D'Andrea, Grifoni & Guzzo 2018). So, technology makes people free from the boundaries of time and space.

E-learning encompasses *web-based learning* (WBL), *Internet based training* (IBT), *advanced distributing learning* (ADL) and *online learning* (OL) (Khan, 2000). Online learning is completely dependent on communication and different methods are used for communication between student and teacher for the transfer of knowledge to occur.

Distance learning can be defined as some form of learning where instructions are involved between two parties, a learner, and an instructor. This may occur at different times, places and uses multiple forms of instructional material (Moore, Dickson-Deane & Galyen, 2011).

One of the definitions proposed for Online learning Vandana and Alexander in 2019 was "education being delivered in an online environment through the use of the internet for teaching and learning. This includes online learning on the part of the students that is not dependent on their physical or virtual co-location. The teaching content is delivered online, and the instructors develop teaching modules that enhance learning and interactivity in the synchronous or asynchronous environment."

The distance education, though, involves entirely different mechanisms for the transmission of knowledge, yet still revolves around a source of knowledge (teacher) and a student. The teacher, instructor or supervisor works as a facilitator as compared to being the only and primary

source of knowledge and the student basically works dynamically in managing how education or learning is being imparted (Galusha, 1998).

In relation to the E-learning educational system in Pakistan, Virtual University of Pakistan, emerges as the flag bearer and is solely responsible for introducing distance learning and an ease to access education for every individual at their very doorstep. People from all across the globe enroll in distance learning programs at Virtual University. They may be of any gender and may identify to any age group, no restriction is imposed. The demographics at Virtual University show that a significant portion of the students at Virtual University consists mainly of females who are geographically distant or are married, and males who are employed. Hence, these population of students find it easy to manage their academic and educational duties at Virtual University as they are either bound by time due to their job or travelling schedules or due to distant locations and family responsibilities.

Along with the aforementioned problems of the students in relation to their professional commitments are likely to face issues with communication with their respective instructors. This issue becomes further problematic when these students reach the final semesters of the degree program where they have to enroll in an internship or a research project. Students required constant supervision with both of these and therefore, the distance learning medium poses hindrance to the learning experience of the students. With the advent of the multiple online communication tools, the interaction has become significantly effective and seamless as they allow the supervisor and the supervisee to communicate with each virtually in real-time.

Research Questions

1. How would communication patterns affect the students' satisfaction during last semester?
2. How does the satisfaction of the students enrolled in Fall & Spring 2016 vary from those enrolled in Fall & Spring 2018 regarding their communication patterns and the guidance they received in their final semester?
3. How one-to-one Skype sessions are effective for improving their conceptual clarity and completion of a project successfully?

Literature Review

Adult learners desire a high degree of flexibility because of the opposing priorities at work, home and school. This level of flexibility is achieved

through the method of distance learning (Galusha, 1998). A study was conducted by Schoech (2002) whereby, 34.8% of the samples in the research were attracted to the distance learning mode of education only because of the flexibility it provides. This advantage is more appealing to the adult students because it accommodates their daily life schedules and also allow them to manage their family life effectively (Kember, Lai & Murphy, 1994).

A significant number of people who enroll in distance learning programs are employed. Wood (1996) found that over 70% of recent graduates who studied by the distance mode are working full time. This suggests that a substantial proportion were employed while they were involved in the learning process.

Despite, providing a convenient learning experience there have been several problems and hindrances reported on part of students and those who criticize the format of E-learning. Problems and barriers encountered by the student mainly include costs and motivators, feedback and teacher contact, student support and services, alienation and isolation, lack of experience, and training (Galusha, 1998). These problems also include the quality of instruction, hidden costs and the attitudes of instructors, students, and administrators. In many ways, each of these issues relates to the others (Valentine, 2002).

It is important to consider that in any learning environment; learning takes place when the transference of knowledge occurs from the instructor to the learner. Therefore, it is necessary that the teacher should be highly effective. This was reminded by Greenberg (1998), the best distance education practices depend on innovative and knowledgeable instructors and later down the line Palloff and Pratt (2002) suggested that technology is not responsible for teaching students, effective teachers are.

Apart from all these problems, the interaction, i.e., the medium radically hinders in the learning process the most. Moore (1989), identifies three types of interaction that may affect learning in online courses: (a) Interaction with content, (b) interaction with the instructor, and (c) interaction with classmates and a fourth-dimension interaction with the system was introduced by Bouhnik and Marcus (2006). Similarly, in his transactional distance theory, Moore (1980) points out that lack of physicality that exists in E-learning courses between the instructor and the learner may likely result in a gap, which is psychological and communication in nature. Such a gap will hinder the ability of the instructor and their students in achieving the desired level of understanding among themselves. Bonk (2002) asserted that absence of non-verbal cues, time taking intervals between a question and its reply and

the lack of spontaneity in comparison to a group which is present face-to-face and is gathered around a table, may both affect the participants positively and negatively.

As there is no routine face-to-face interaction of the learner with their instructor, student may have trouble evaluating themselves, Galusha (1998) suggested that students engaged in E-learning programs, unlike the orthodox learning environment, are more prone to have feelings of alienation and loneliness because there is no prevalent social community in this pedagogical approach.

Rationale of the Project

In light of the arguments cited above, this study addresses the mode/medium of communication between the students enrolled in research projects particularly after passing all the semesters. They have gone through thick and thin and reached the final semester of their degree program where they had to take up a research project. Starting from the conception of idea for research till the final execution of research in the data collection and final draft writing, requires a lot of assistance and guidance from the supervisor. For serving the communication purpose, routinely used tools were Moderated Discussion Boards, Emails and Adobe connect sessions, which still did not fulfill the sheer amount of guidance students require in a research project which they used to discuss at the time of viva voce and sometimes through emails. They would share accounts of their troubles that they faced and how lack of communication and absence of a physical presence proved hindering in their understanding of the concepts regarding research.

Not long after realizing all the difficulties that students experienced, few pedagogical changes were designed and implemented. For instance, face-to-face interaction was opted in cases where student implored for a physical meeting and moreover, one-to-one Skype sessions were also held with every student on a daily basis at the start of their research project and till the proposal defense. After that, Skype meetings were reduced to one session per week or earlier also if student would ask. The main reason, apart from the gap in communication between the supervisor and the student, was not only the lack of physical communication but also that the individuals who took up research projects. These were individuals who were employed. Research projects can only be taken up by students who are employees of any organization and could not find the time to do an internship, as working in a clinical, educational, or developmental sector would be in clash with their working hours. These students are involved

in either public or private organizations and verily on and off, they were likely to face difficulty in scheduling meetings (Skype or in person) in between their office timings. Supervisors from Virtual University of Pakistan accommodated those students and provided guidance after University timings. These communications related enhancements might have impacted to some extent on their learning capacity.

Methodology

Research Design. In this present study qualitative approach was used to explore the communication barriers which the project students experience, and main objective was to find out the efficacy of the improvement in communication via one to one Skype session for project students and how it affects their learning process.

Participants. 20 candidates were approached for in-depth interviews. Researcher approached ten (10) participants who had already passed (Fall 2016, Spring 2016) when the mode of communication was only Moderated Discussion Board and Emails and 10 from the semesters (Fall 2018 & Spring 2018) when intervention regarding the improvement in communication was designed and accomplished/conducted in the form of one to one Skype sessions. Their responses are recorded against the interview protocol.

Procedure. BS Psychology program requires the students to complete project as part of degree requirements. BS (4 years) Psychology and M.Sc. (2 years) Psychology registered at Virtual University of Pakistan have a three credit hours Project in their final semester. In the present study, data was collected by using an interview protocol and following steps were followed:

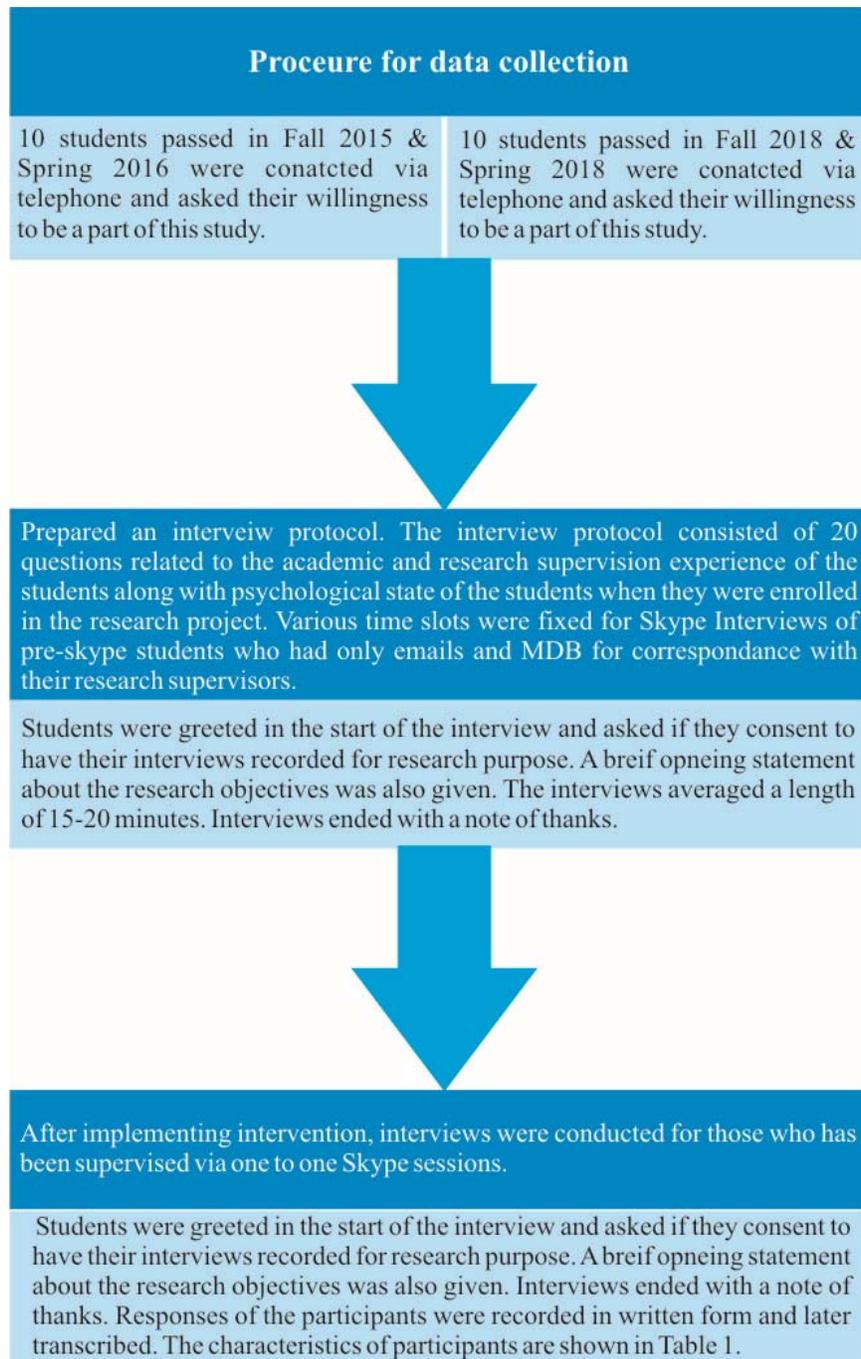


Table of the demographics

Characteristics of the participants.

Participant	Age	Nature of Job at the time of Project	Prior Education/Degree	Current Enrollment	Marital Status
1	28	Private	MBA	NA	No
2	31	Armed Forces	Inter	NA	Yes
3	33	Private	MBA	NA	Yes
4	29	Private	Inter	BS	Yes
5	30	Private	BBA	NA	Yes
6	31	Private	B.Sc.	NA	Yes
7	27	Private	M.Sc.	NA	No
8	34	Private	BBA	MBA	Yes
9	36	Private	MBA	NA	Yes
10	28	Private	Inter	NA	Yes
11	32	Private	B.Sc.	M.Sc.	No
12	31	Private	M.Sc.	NA	Yes
13	29	Private	Inter	NA	Yes
14	33	Private	BBA	NA	Yes
15	36	Private	M.Sc.	NA	Yes
16	38	Private	B.Sc.	NA	Yes
17	27	Private	Inter	NA	No
18	29	Private	BBA	MBA	No
19	31	Private	MBA	NA	Yes
20	33	Private	Inter	M.Sc.	Yes

Ethical consideration. An informed consent was taken from the students prior the interview via telephone and its recording. It was ensured that the data will be only used for academic research purpose. The confidentiality of the information was ensured.

Data Analysis. Thematic Analysis is the best approach to classify themes that reflect from the textual data. In this analysis, themes were extracted from participants' interviews in order to get a complete understanding of their issues, which they faced while communicating with their project supervisors and how effective was the intervention (one to one Skype sessions) for broadening their learning horizon.

After that, common codes were combined, which formed sub-themes and super ordinate themes. Super ordinate themes were constellated into categories that reflect participants' problems and effectiveness of the

communication intervention as compared to conventional supervision which they had in their previous academic programs.

Analysis

Following are the major themes found from the interview conducted with the sample.

1. Communication: The basic need. Communication is one of the most important needs for survival in the era of technology and globalization. People feel connected with each other via communication tools like social media. Participants stated that learning through a distance learning program created isolation for them and they didn't feel like being in a University because of the lack of communication. A student, on their own set of skills or understanding cannot achieve the same results as compared to when assisted or helped by an expert supervisor or teacher. Participant A reported,

“Jab main nay project uthaya to mjhay pata hi nahi tha k kia karna hai. Mjhay yeh SPSS kabhi nahi pata tha k kia hota hai. Meri supervisor nay btaya k kia karna hai aur kaisay karna hai.”

Translation

“When I opted for the research project, I had no idea about the SPSS. My supervisor guided me with each and every step”.

Participant B reported,

“Main nay pehlay kabhi research nahi ki thi. Mjhay kuch bhi nai pata tha. Yeh bhi nahi pata tha k literature kahan say uthaun.”

Translation

“I did not have any experience with research before. I had not no idea about anything. I didn't even know from where I would gather the literature.”

Almost all the participants agreed that need for communication exists. The aforementioned verbatim statements of the participants suggest that communication is very necessary in order to bring about the desired results. Sticking particularly to the research project, a student despite being capable yet seeks guidance and help in order to produce and refine their product (research) better.

Considering that the student and the instructor are separated by distance, a medium should be developed and presented for the two to communicate their concerns. Since working through a research project is a technical task, therefore, a student needs to communicate with his/her supervisor (instructor) for learning and understanding technical concepts

regarding research at this stage of learning. Self-motivated students of the sample reported that they encountered less problems as compared to students who constantly had to struggle with motivation.

Participant C reported,

“Hamein khud hi supervisor say rabta karna hota hai, supervisor ham say nahi karta. Obviously, supervisor k paas kaafi saray aur bhi bachay hotay hein aur wo har ik ko khud to nahi pakar skta baar baar. Meri pehli 2 researches fail hi isi lea huien k main nay supervisor say sahi say approach hi nahi kia. Meray mein keh lein k wo motivation hi nahi thi.”

Translation

“We had to contact the supervisor ourselves as they didn’t contact us themselves. Obviously, the supervisor has several other students to supervise, and they cannot pursue every student on their own. I failed my research projects the first two times for the same reason that I did not contact my supervisor properly. You could say, perhaps, I wasn’t motivated enough.”

Participant D reported,

“I was pretty self-motivated so mujhay koi khaas pareshani ya masla nahi hua but there were other students jo supervisor say rabta nahi kartay thay ya apas mein bhi, agar koi cheez smajh nai aa rahi hoti thi to puchtay nahi thay.”

Translation

“I was pretty self-motivated; therefore, I didn’t have troubles as such but there were other students who didn’t contact the supervisor or even amongst themselves. They didn’t ask any queries regarding anything which they had trouble understanding.”

Interacting through E-mail or through any mode, per se, can sometimes be a difficult task not because the protocols involved were incomprehensible, but they just were not able to develop a motivation, which would push them to interact or communicate. Unlike, their previous courses, students had an additional mode of communication present for them to use when they were working on a research project – Skype. This allowed them to communicate with the instructor in real-time and provided a face-to-face interaction and the students didn’t have to wait for a significant amount of time, unlike response of an email, to raise their concerns and get them answered.

2. Reaching Out to Supervisor. The instructor is the major source and solely responsible for the students to seek help with. A student may require help with academic things and technical things, as reported by the sample. One of the main factors that may hinder communication between the student and their supervisor, as reported by a significant population of the sample was that the student and supervisor might not develop a mutual sense of understanding. A student may not understand what their supervisor demands of them, and a supervisor may fail to understand the concerns of their respective student. This may form a gap between the two.

One student reported

“Meri dusri attempt k dauraan meri supervisor change hogaien thien aur yeh meray liye ik masla sabit hua. You see, mjhay purani supervisor k sath baat karnay ki adat hogai thi aur abhi meri un k sath understanding develop hi hui thi thori si k supervisor change hogaien aur phr mjhay naye siray say understanding par kaam karna para aur is sab mein time bhi laga aur dushwariyaan bhi aaiyen.”

Translation

“During my second attempt at research, my supervisor was changed, and this posed a problem for me. You see, I felt comfortable and was used to discussions with my previous supervisor but then the supervisor changed, and I had to work develop a new understanding altogether and this was difficult.”

The change of supervisor during an on-going project may as well hinders communication as well, obviously, because two different people would work on two different principles and hence, would present different demands from the student, which may in turn create trouble for the student to adapt and they might then avoid reaching out to their respective instructor for help. The protocols involved in reaching out the supervisor may as well trouble students and they might fail to do so. As a significant portion of the sample reported that in order to seek meeting with their supervisor, they had to formally write them an email to ask for a time and then talk to them on Skype. This whole process took time and an additional effort to write email each time before a meeting.

They suggested that if supervisors replied to their texts on Skype instantly or took considerably less time to respond, it would have helped them in reaching out to them considerably more. It is noteworthy that VU offers the students to meet their supervisors in physical as well. The participants were of the view that if it were possible for them, they would have opted to meet their supervisors face-to-face and have discussions with them at length.

3. Time Management; A crucial task to accomplish.

Managing time when doing a research project is of utmost importance. It is necessary to consider, before moving ahead that only students who are currently employed are engaged in research projects. The students of research project are constantly managing time between their jobs and their projects, not to mention their families as well. Since distance learning program offers enrollment to people who are in the middle or even late adulthood period of their life, therefore, it is important to note that students who are engaged in a research project are working and may as well likely have a family to attend to. 75% of the sample for this study was married and had kids. They reported having troubles sometimes managing all these things all the way through.

They reported that their supervisors were very considerate and flexible when scheduling meeting with them. This helped them a lot because unlike in their previous courses, when they had a query, they would just simply E-mail their instructor or would leave a message at the MDB (Moderator's Discussion Board) and would receive a reply, in majority of the cases, somewhere in the next 24 hours. The entire sample was of the view that Skype not only saved their time but also provided better opportunities to seek help with their supervisor at a moment's notice.

4. Breaking communication barriers in distance education

Unlike the aforementioned themes generated from the interviews, problem solving mainly links to the difference between conventional learning setup and distance learning. The entire sample, who previously all experienced the conventional learning environment, was of the view that problem solving is more effective in the conventional setup. This is because the instructor and their peers, all are present in the same physical space as themselves. They added further on that seeking help from the instructor for solving a problem in the conventional setup included a discourse, which is verbal and involves visual cues as well. While on the other hand, E-mail and MDBs only involve written expression and written expressions are open to interpretation. An instructor might view a student's query in another light and their response might lead the student to understand the response in some other light. Skype, although, breaks the interaction continuum and provides the maximum affective communication possible. All the participants of the sample viewed Skype as the best option for communication and suggested that they didn't require any other medium other than this. They viewed that if meetings would have been physical, they would have been more effective but still, what Skype offered was

enough to help them progress efficiently. The participants viewed the need for communication to be equally important before and after the proposal defense and Skype proved to be a great medium in this. It is important to mention that these students were the one who couldn't attend Adobe Sessions because of their working hours yet on the other hand, they reported initiating interaction with their supervisor for significant time and for a considerable number of sessions because this was for the first time that they had a proper two communications with their instructor. This not only bridged the gap between supervisor and the student but in fact, provided way better understanding and experience as compared to Emails and MDBs, one participant reported. Therefore, when asked if Skype would have been removed as a mode of communication for them, their progress and understanding of the research project would have suffered immensely and probably would have resulted in them failing the project entirely.

Discussion

Communication has been, since the inception of mankind, a need for survival. As the time progressed, humans developed technologies followed by advancement whereby, the distance lessened and eventually the entire human race found itself very close though virtual, yet in proximity.

A few decades ago, the distance-learning programs became more popular than it ever had in the past. Its popularity started growing immensely with each passing day and a huge population started learning via this method. Despite its ever-growing popularity, cost-effectiveness and accessibility to education; distance learning has been criticized. One of the main reasons why distance education is criticized or questioned about its effectiveness as a learning module is the lack of interaction. There is a load of literature which targets the communication barriers found to be affecting learning in this pedagogical approach. On the other hand, it is suggested by Donaldson (2011) that with Internet-capable devices, interactive tools have expanded and so with this expansion, the opportunities to collaborate, access resources and problem-solving methods have collaborated. Although, this is not only the entire case. Isman & Altinay (2005) suggested that the transfer from correspondence way to online systems and telecommunication systems in distant learning system has posed several hinderances. These include the need of training and guidance, lack of awareness of the new technology, unsatisfactory experience with technology, participants unwilling to adopt the new

technology, problems with using and accessing internet, difficulty in understanding the demands of the teacher and the system. Therefore, addressing all of these problems effectively is important for an effective learning to take place.

Shen (2004) pointed out in his study that most people find it difficult to communicate with strangers and tutors. In other words, a student will only progress if they communicate with their respective supervisor. This interaction will only take place when there's an open access to communication between the student and their supervisor where it is important that the student feels comfortable and at ease to interact with their respective supervisor.

Virtual University has been adopting to new technologies with time and engaging students to adapt to these changes as well. Before the intervention was planned and adopted, research students had only Emails and MDBs for communicating with their respective supervisors. It was hypothesized that progress of these students would increase and would be affected immensely if some other online communication tools could be added. It was noted that students were not satisfied with this particular mode of communication also, as reported by several participants as well. Students previously working on research without Skype reported that they found it difficult to seek out interaction with their supervisors.

Students seek to interact with their supervisors, as soon as this window of access is available to them; they reach out to their respective supervisor and interact with them. Berge (2013) pointed out, in his hierarchy of communication capabilities that as soon as access to interaction is possible, both the student and the instructor should show acceptance towards distance learning for a meaningful and progressive interaction to occur.

Those who are enrolled in this distance-learning program and have managed to conduct a research (last semester) have obviously accepted distance learning entirely, that's why they are present and have survived until now successfully.

These students at this stage of learning, for the first time in their entire degree program, seek to interact with their supervisor in a rather real-time environment, i.e. via Skype. It is important to note this as well that these are the students who previously communicate with their instructors through E-mails and MDBs only. But with Skype now in access, they reported contacting their supervisor very frequently.

Berge (2013) in his hierarchy of communication capabilities suggests collaborative and cultural barriers once access to communication is available and acceptance is generated by both student and instructor. He

further adds on that as one moves up through the sequence, more complex communication barriers come in to existence. The barrier of a student reaching out to his/her supervisor and building a certain level of understanding is usually overcome easily and requires minimum effort both at the end of the supervisor (instructor) and the student.

The management of time is quite difficult for the students who are working on a research project because these students are employed and have to give time to their work and academic life both simultaneously. Students and their supervisors work in collaboration, whereby, supervisor considers the student's conditions and they both develop a mutual, consensual mode of communication and framework.

A supervisor could give student time after the student is finished working at their workplace or whatever the time is accordance with each other's easiness. Once collaboration exists between the two, a few cultural issues could be observed is language and distant geographical location. For example, one participant of the sample was currently residing in Germany and doing a research project with under the supervision of an instructor present in Pakistan. While other students who had the opportunity to meet with their supervisor physically, this student in particular was bound by distance. However, this student reported no problem or hindrance ever encountered when it came to communication with her supervisor.

Many participants reported issues during problem solving which they encountered during their research projects. This could be linked to poor memory, whereby, a student fails to utilize the learned knowledge to the field or simply because they lacked the appropriate knowledge (Demetriadis, Papadopoulos, & Tsoukalas, 2005). The supervisors, as per the respondents, were very considerate and provided them all the relevant knowledge through every possible mode of communication. With earlier students, who didn't have the access to their supervisor through Skype, learning was a bit difficult as compared to students who had access to Skype and thus, their supervisor. Students who only had Emails and MDBs as the only mode of communication reported facing troubles in grasping and understanding concepts, even the very basic ones. On the contrary, students who had access to their supervisor through Skype reported facing less problems learning and acquiring knowledge.

Conclusion & Major Findings

From a learning perspective, distance learning offers a lot. This includes a rather easy access to education, which is cheaper and more user-friendly.

Despite all of this, there is a hierarchy to the communication barriers in distance learning that can be organized as technical, psychological, social, cultural, and contextual in nature (Berge, 2013).

Communication barriers were observed with students pursuing research project, mainly. Two years ago, a communication barrier was noticed for students communicating through Emails and MDBs. An intervention was planned for the upcoming research students. Skype was added as a medium of communication. The results between the progresses of the two batches of students is found to be astoundingly different. Students reported higher satisfaction, enhanced learning development and better communication through Skype. They further suggested Skype to be the most effective medium of communication, which helps minimize the aforementioned problems the most. They reported that with mediums such as Skype, it became easy for them to initiate a communication and with the presence of the supervisor in real-time, though virtually, not only helped them with their research but also motivated them to partake in the project with more enthusiasm.

The barriers faced by students are often in overlapping of each other, and the list just continues to grow and as technology advances more interventions could be planned to further minimize the communication barriers.

Limitations

The sample size for the current study is not optimum for generalization. It also lacked a gender diverse data. It is important to cover the female population in the data set as problems faced by female and male students are completely different.

Suggestions

A study should be conducted to see the gender differences in the nature of problems faced by male and female students regarding communication patterns and barriers they have experienced. Another suggestion that could be implemented is regarding the research design. The one opted for the current study is purely qualitative in nature and it is time of need to use mix method design for more generalizable results.

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