

## Problems Experienced by Undergraduate Students in Conducting Research in Online Distance Learning

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### Abstract

This study's aim was to examine the difficulties that undergraduate students had while doing their research in online distance learning environment. This study used a descriptive research design and was quantitative in nature. By using census all 247 students enrolled in different undergraduate degree programs in department of education were selected who have completed research projects as a part of their degree program at Virtual University of Pakistan. In the questionnaire, students were asked about problems faced by them in three domains i.e. student-related, supervisor-related and institution-related. The quantitative data were analyzed using descriptive statistics. The findings of the study revealed that during research conduction the problems faced by students are; lack of discussion with supervisor, lack of time for research, lack of digital library resources, insufficient content and lack of direction, tool/questionnaire selection, accessing resources, unwillingness of participants and problems in writing and reporting the results. The findings highlighted the problems of resources that hindered students' smooth learning progress at VU. It is recommended that institute may provide digital library resources and also upload the theses on its website so students can get help from different sources during research conduction.

**Keywords:** *Online, Distance learning, Environment, Problems, Research, Undergraduate, Students*

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## Introduction

For people, especially adults, who were unable to attend campus-based education due to personal, social, geographic, or other reasons, distance education was initially created with the goal of providing post-secondary education (Lee, 2017). Distance learning has moved from correspondence courses through analogue audio-based Video-based (television, videotape), audio-based (radio, audio cassette tape), and then to personal computers and the Internet (Lee & Chan, 2007). Online learners can alter the speed, location, and flexibility of their learning by utilizing both synchronous and asynchronous components (Shih et al., 2008). With the assistance of evolving web-based platforms and technology, distance education allows students to learn in environments that are not constrained by time or place (Bilgiç & Tüzün, 2015). Many factors influence why educational institutions select distant learning. Access to education and learning, updating skill development, improving education quality, strengthening the capacity of the educational system, eliminating age-related inequities, and addressing particular target groups are all important. People need to be educated, urgent training to target groups is provided, educational capacity is increased in new subject areas, employment and family responsibilities are integrated with education, and education is given a global perspective (Moore & Kearsley, 2012).

Research is carried out to address a particular issue. A precise and systematic approach must be taken while looking for new knowledge, abilities, attitudes, and values or when reinterpreting ones already present. Researchers want to analyze, identify outcomes, and determine if recently discovered truths hold true in diverse contexts using the data that is already accessible. Research in education is essential because it advances knowledge, improves practice, and provides better data for policy making. Teachers may thus utilize the results of their study to enhance their abilities and procedures for teaching and learning. Researcher caution is required when conducting researches. To finish each stage of the activity, they must allot enough of time. They must be focused and put in a certain number of hours at the library each week. The researchers need to add a few extra hours or weeks before the deadline since some tasks take longer than expected, and some research job stages are more difficult than they expect. In short, there are unexpected challenges and issues that might result in academic failures (Trimmer, 1992).

Undergraduate research can be done to solve simple classroom issues or unforeseen classroom situations. Professionals can utilize these findings to enhance their teaching abilities. To make sure that inexperienced researchers do not find this method challenging, more attention must be

used. Students can develop their identities professionally via undergraduate studies. Students gain a thorough understanding of the numerous facets and methods of their study and process via this experience. These strategies may be used by students to discover solutions to issues in the classroom as well as in real-world scenarios to find academic resources and establish positive working relationships with professors. Yeoh and Terry (2013) carried out a survey in Australia to learn more about the experiences students have with research. They draw a number of conclusions from this study that academic background, atmosphere, and research limitations are barriers for newcomers. Another study by Li and Serle (2007) analyzed normative databases to investigate high-quality experiences. They pointed out that there is a big problem with data analysis. Start with coding, diversify the categories of researchers and stakeholders, and skip explaining the evidence.

Institutions may yet encounter challenges and issues while integrating technology. Primary (external) and secondary (internal) barriers to technology integration by Ertmer (1999). The principal barriers include equipment, education, access, time, and technical support. On the other hand, secondary obstacles (specific to instructors) are connected to pedagogy, beliefs, and personal preferences. When considering the issues facing higher education, it is clear that Open and Distance Learning (ODL) is solving the problems of new generations by adopting specific strategies. It is also contributing in improving equity and quality of education in society (UNESCO, 2004). Open and Distance Learning of Education has dual benefits. On the one side, it is fulfilling the international demands while on the other side, it providing facilities to the individuals that they can able to utilize their potential. In addition to the advantages of open and distant learning, there is an un-ignorable fact that students have to face several problems related to instructional, individual and institutional (Bhalalusesa, 1998, 1999; Mushi, 2001; Cosmas & Mbwette, 2009; Mbukusa, 2009).

### **Literature Review**

#### ***Problems Faced while Conducting Research in Online Distance Learning***

It is a fact that doing of research on undergraduate students and their supervisors is not an easy task. It is quite difficult and challenging. Quality of research has massive effect over society, nation and on the whole of the world. There may be several influential factors that can contribute in research (Bocar 2009; Duze, 2010; Manchishi et al., 2015; Myers 1999; Pitchforth et al., 2012; Vos, 2013). Dombeck and Wells-Moran (2006)

claim that awareness, organization, and dedication are the only necessary components of time management abilities. To ensure that important tasks are completed on time, one must become aware about and record everything he does. One must also commit to following a timetable and not becoming distracted by anything more interesting at the time. They underlined that time management and organizational abilities may be applied to a wide range of everyday duties. Because it will help the person in whatever he or she does.

Due to the advancement of web-based platforms and technology, distance education offers students learning environments that are independent of time and location (Bilgiç & Tüzün, 2015). However, when it comes to technological integration, institutions sometimes face barriers and problems. According to Davis, Gough, and Taylor (2019) student challenges with online learning may include expectations misunderstood, time management issues, and interpersonal communication challenges, whereas teacher challenges may include challenges with setting expectations, providing feedback, and interpersonal interactions. In their literature-based research, O'Doherty, Dromey, Loughheed, Hannigan, Last, and McGrath (2018) discovered that obstacles to online learning in medical training may include time restraints, inadequate infrastructure, a lack of institutional strategies and support, and unfavorable attitudes on all sides. The adoption of web-based distance education in teacher education is hampered by three factors i.e.; a lack of high-speed internet and trustworthy technology, a lack of trainer and student abilities, and a lack of support services (Burns, 2011).

Institutional relationships, such as relationships with school supervisors, understanding and concern with supervisors, frequent communication between student and supervisor (Yousefi et al., 2015). The research environment can also contribute such as the nature of faculty members, peer support and their commitment (Pitchforth et al., 2012). Some scholars identified institutional and environmental challenges of students in distant learning education, among them the name of Garland (2007) is most prominent. These challenges and problems are lack of time, and students need more time to create understanding with subject. Kember (1989) also stressed that poor time management contribute to further problems, for example when students neglect to balance their responsibilities to their families, friends, and work with their off-campus research responsibilities. According to (Tuskeen et al., 2014), difficulties in Pakistani research include a lack of a code of conduct, a lack of funding, a lack of access to journals, and sample failure. Additionally, they pointed

out that it is challenging to get representative data, thus researchers frequently gather information from people who are simple to locate.

Al-Qaderi (2016) also investigated the difficulties faced by Yemeni undergraduates at Ibb University in completing a thesis research project. The three main problems that Yemeni English learners had to deal with were; (1) Poor academic performance in English as a language of instruction and research or in English in a professional field, (2) lack of well-stocked libraries with free access to online resources, (3) their difficult situation and unfavorable attitude towards the research project. According to (Kikula & Quorro, 2007; Kombo & Tromp, 2011; Repoa, 2007), Tanzanian students have to cope with a number of important challenges while writing their research projects. The writers were unable to develop an effective research strategy, and the problem statement was not articulated well enough to direct the readers. The study procedure, including the research questions, was poorly formulated, and the literature review was insufficient. It has been demonstrated that the findings are not reported clearly. Ahmed and Mahboob (2016) conducted a research study evaluating research approaches and challenges faced by a group of 32 PhD students from the Medical Department of Lady Reading Hospital, Pakistan. They identified various issues with this study, including research methodological issues, research question and hypothesis development, background and introductory sections, data and material collection, goal setting, and proper attribution. The method of quantitative soil theory was used in this study. The study found that a significant proportion of graduate students had difficulty preparing their research proposals, mainly due to inadequate guidance, and suggested several ways to improve these skills and indicates recommendations.

Another study is conducted by Yiu (2009) at the University of Hong Kong to examine the problems that ESL postgraduate students face and the self-driven coping mechanisms they have developed to deal with the challenges. For the study, information was gathered from 150 postgraduate students using questionnaires and interviews. The study's conclusions looked at how the participants' difficulties were mostly connected to language, culture, industry, and discipline. The inability of participants to build the courage to articulate their academic voice and the difficulty of communicating ideas in L2 are the two most significant problems.

The postgraduate students and their supervisors encounter a number of challenges while working on their theses (Duze 2010; Manchishi et al., 2015). There have been several research studies on these topics worldwide, including those by (Changiz et al., 2003; Lessing & Schulze,

2003; Wang & Li, 2008). These studies show that the issues mostly relate to the students' ability to understand the research project and all of its parts clearly. It is clear that for postgraduate students and their supervisors, conducting research and producing theses are difficult tasks. The importance of quality research in addressing societal, national, and international demands cannot be overstated. However, the number of postgraduate students in our country as well as many other countries who finish excellent research projects and produce thesis papers for academic degrees is not extremely high. Thesis works by graduate students may be influenced by a variety of factors (Bocar 2009; Duze 2010; Manchishi et al., 2015; Myers, 1999; Pitchforth et al., 2012; Vos, 2013).

Although the topic is quite significant yet not a large number of researches have been done on online undergraduate students in Pakistani context. There is need to do a piece of research that knowledge, skills, behaviors, and approaches of students can be highlighted. There will be several influential factors on research that can determine the quality of work. These influential factors may be diversified and can discuss different aspects of personal life of a student such as student knowledge, experience, commitment and devotion to work, social and economic condition and mental condition. While there might be some institutional factors such as cooperation, guidance, fund (Bocar2009).

### **Objective of the Study**

The objective of the study was to investigate the problems faced by undergraduate students in conducting research in online distance learning environment.

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The research questions of the study were as follows:

1. How students analyze their own weaknesses and problems in conducting research?
2. What are the supervisor-related problems faced by the undergraduate students in conducting research in online distance learning environment?
3. What kind of problems are faced by the students on the part of the VU?

### **Methodology**

The purpose of this study was to examine the problems faced by undergraduate students while doing research in an online distance learning

environment. This study followed a positivist approach with a descriptive research design. A descriptive research design is a scientific method of monitoring and interpreting a subject's behavior without changing it. It is used to acquire data about the condition of the phenomenon to be described, what occurs in a situation with respect to variables (Mouton, 2003). Descriptive research approach was suitable since the primary goal of this study was to investigate the problems that ODL students experienced during research conduction.

### ***Research Project Module: EDUA630***

Research project is a three credit course offered in last semester of their degree programs. In this course students have to submit a research project report. There are six assignments in this course. Students have to submit all six assignments on the LMS. Details of the breakdown of the assignments are given below:

Table 01  
*Detail of Assignments*

Assignment	Task
1	Selection of topic
2	Making objectives and research questions/ hypotheses
3	Literature review/ Relevant Material with topic
4	Methodology/ Instrument development
5	Complete Data Collection from Sample and appropriate analyses
6	Complete Report

### ***Sample of the Study***

The study population consisted of 247 undergraduate students enrolled in various undergraduate programs in the field of education who have completed research project in Virtual University of Pakistan in spring 2019. By using census all 247 students were selected who have conducted their research project at undergraduate level at department of education in VU. Among 247 students, the response rate was 94. There were total 60 females and 34 males participated in the study.

### **Data Collection Procedure**

For this research study, the data was collected through an online questionnaire using five point Likert Scale. The questionnaire was developed by researchers and validated by four experts who were supervising the theses in online distance learning environment. The reliability of the instrument was 0.87. The questionnaire was comprised of 22 statements (Five-point scale: indicating from “Strongly Disagree” to “Strongly Agree”). In the questionnaire, respondents were asked about problem faced by them in the three domains i.e. student related, supervisor related and institution related. The questionnaire was generated in Google form and sent by email to the selected students. In Learning Management System, announcement was also made to the students in the announcement sections.

### **Data Analysis**

Descriptive statistics involving mean, standard deviation and percentages were employed to analyze the quantitative data. Data analysis results were assessed whether undergraduate students faced student related, supervisor related and institution related problems during their research conduction.

### **Findings**

There are three categories of problems that online distance learning students face during their research. Participants responded that they have faced problems related themselves, their supervisor and institution. Based on their experience as Online Distance Learning students, all students rated the following problems faced by them during their research.

#### **Student Related Problems Faced by ODL Students**

Table 02

*Student Related Problems Faced by ODL Students (N = 94)*

Statement	Strongly disagree (%)	Disagree (%)	Undecided (%)	Agree (%)	Strongly agree (%)	Mean	SD
Lack of motivation and commitment	10.6	23.4	19.1	31.9	14.9	3.17	1.25
Lack of time for research	4.3	14.9	14.9	44.7	21.3	3.64	1.10
Conflicts between work /family and study schedule	0	10.6	14.9	51.1	23.4	3.87	.89



Lack of time for assigned task	8.5	23.4	17.0	38.3	12.8	3.23	1.19
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Table 02 shows the student-related problems faced by undergraduate students in conducting research. It was found that out of 94 students, 31.9% agreed that they had lack of commitment and motivation for their research conduction. 44.7% students agreed that they did not have enough time for doing research. 51.1% students agreed that they faced conflicts between family /work and study schedule. 38.3% of students stated that they do not have enough time to do the work at hand in time. The finding shows that most of the students face problems during their research work.

Table 03

*Methodology Related Problems Faced by ODL Students (N = 94)*

Statement	Strongly disagree (%)	Disagree (%)	Undecided (%)	Agree (%)	Strongly agree (%)	Mean	SD
Problem in writing and reporting the results	0	25.5	12.8	46.8	14.9	3.51	1.03
Problem in tool/questionnaire selection.	0	29.8	19.1	34.0	17.0	3.38	1.08
Problems with accessing resources	4.3	25.5	12.8	31.9	23.4	3.46	1.23
Language problems with foreign resources/articles	4.3	46.8	17.0	14.9	17.0	2.94	1.21
Problems for getting permission from institute.	4.3	34.0	19.1	21.3	21.3	3.21	1.24
Problem of unwillingness of participants	2.1	29.8	14.9	38.3	12.8	3.30	1.10

Table 03 shows the methodology-related problems faced by undergraduate students in conducting research. It was found that out of 94 students, 46.8% students agreed that during their research they faced

problems in writing and reporting the results. 34% students agreed that they faced problem in tool/questionnaire selection. 31.9% students agreed that they faced problems with accessing resources related to topic. 46.8% students disagreed that they faced language problems with foreign resources/articles. 34% students disagreed that during data collection they do not faced problems for getting permission from institute. 38.3% students agreed that during data collection they faced problem of unwillingness of participants.

#### ***Supervisor Related Problems Faced by ODL Students***

Table 04

*Supervisor Related Problems Faced by ODL Students (N = 94)*

Statement	Strongly disagree (%)	Disagree (%)	Undecided (%)	Agree (%)	Strongly agree (%)	Mean	SD
Selection of topic	6.4	2.1	10.6	44.7	36.2	4.02	1.06
Give direction to the students properly	21.3	34.0	19.1	10.6	14.9	2.64	1.33
Provided the information about sources of literature	6.4	25.5	6.4	38.3	21.3	3.43	1.26
Proper guidance from supervisor	19.1	12.8	14.9	34.0	19.1	3.21	1.40
Lack of discussion with supervisor	12.8	21.3	4.3	46.8	14.9	3.30	1.31
Delayed/ineffective feedback on the marked assignments	10.6	53.2	14.9	17.0	2.1	2.46	.97
Assisted the student in data analysis	2.1	12.8	34.0	36.2	14.9	3.49	.97
Assisted the student in report writing	6.4	12.8	29.8	42.6	8.5	3.34	1.02

The problems that undergraduate research students have with supervisors in conducting research are shown in Table 04. It was found that out of 94 students, 44.7% agreed that supervisor helped the student for the selection of topic. 34% students disagreed that during their research supervisor did not give direction to the students properly. 38.3% students agreed that supervisor provided the information about sources of literature during

their research work. 34% agreed that they got proper guidance from their supervisors. 46.8% of students thought that they had insufficient discussions with their supervisors at regular intervals while conducting research. 53.2% students disagreed that they received delayed/ineffective feedback on the marked assignments from the supervisors. 36.2% students agreed that supervisor assisted the student in analysis of collected data. 42.6% students agreed that supervisor assisted the student in report writing.

### ***Institution related problems faced by ODL students***

Table 05

*Institution related problems faced by ODL students (N = 94)*

Statement	Strongly disagree (%)	Disagree (%)	Undecided (%)	Agree (%)	Strongly agree (%)	Mean	SD
Adequate resources (Adequate dedicated faculties, IT lab/library, fund)	10.6	17.0	27.7	36.2	8.5	3.15	1.13
Formats and sample of thesis writing	8.5	21.3	14.9	36.2	17.0	3.33	1.24
Lack of digital library resources	8.5	21.3	23.4	25.5	19.1	3.26	1.24
Insufficient content and lack of direction	12.8	21.3	23.4	34.0	8.5	3.04	1.19

Table 05 shows the institution-related problems faced by undergraduate students in conducting research. It was found that out of 94 students, 36.2% students agreed that they do not have adequate library facility, information technology labs and fund resources from the institute. 36.2% of students agrees that they were given insufficient thesis writing forms. 25.5% students agreed that they do not have resources of digital library. 34% students agreed that research course has insufficient content and lack of direction.

### **Discussion**

The study aim was to investigate the problems faced by undergraduate students while conducting research in an online distance learning environment. Students face three types of problems i.e. supervisor-related, student-related and institution-related. The findings revealed that most of

the students agreed that they had lack of commitment and motivation for their research conduction. According to Pearson and Kayrooz's (2004) findings, one of the problems students have when conducting research is a lack of motivation and commitment. Students agreed that they did not have enough time for doing research. Time management was identified by Nash (2005) as the big problem for distance learners in the USA. Furthermore, they faced conflicts between family /work and study schedule. They don't have enough time to do the work at hand in time. The finding shows that most of the students face problems during their research work. In an additional research, Rao and Giuli (2010) came to the conclusion that the majority of ODL students had trouble meeting deadlines and finishing coursework. Anderson et al. (2006) also indicated that during research conduction time was a very restricted resource for students.

Most of the students agreed that during their research they faced problems in writing and reporting the results. They faced problem in tool/questionnaire selection and accessing resources related to topic. Students disagreed that they faced language problems with foreign resources/articles. Moreover, students disagreed that during data collection they do not faced problems for getting permission from institute. (Çetin et al., 2007; & Suna et al., 2007) also pointed out that graduate students faced problems for getting permission from institute for research conduction. Students agreed that during research work they had insufficient discussion with their supervisors at regular interval. Drennan and Clarke (2009) found that insufficient discussion seriously hindered the research work at regular interval.

Furthermore, students agreed that they do not have adequate library facility, information technology labs and fund resources form the institute. This finding concurs with those of previous researchers' findings (Duze, 2010; Trigwell & Goddet, 2005). The results showed that thesis research was hampered by little support of library facility, personal problems, accommodation and fund resources. They were given insufficient thesis writing formats and they do not have resources of digital library. Students stated that research course has insufficient content and lack of direction. Research shows that most distance courses have poor instructional design, which can adversely frustrate learners and affect learning outcomes (Merril, 2006). Vergids and Penagiotakoulos (2002) study at Greek Open University reported that 20% of the respondents noted that instructional materials were poorly designed and were difficult or extremely difficult to use. Additionally, Basaza et al. (2010) discovered that Ugandan distance learners had difficulties due to a lack of study resources.

**Conclusion**

The purpose of this research was to investigate the problems experienced by undergraduate students in distance learning during their research project at Virtual University of Pakistan. It is concluded that student faced problems i.e. lack of discussion with supervisor, lack of time for research, conflicts between work/ family, study schedule and also lack of time for assigned tasks. With respect to methodology they faced difficulties in tool/questionnaire selection, accessing resources, unwillingness of participants, writing and reporting the results. Supervisor related problems found that during their research supervisor did not give direction to the students properly. Furthermore, students faced problems related to institution are; digital library resources, insufficient content and lack of direction, formats and sample of thesis writing and adequate resources. It is concluded that an above mentioned problems students faced at individual, supervisor and institutional levels that hindered students' smooth learning progresses.

Based on findings, it is recommended that institute may provide digital library resources and also upload the dissertation on their website so students can get help from different sources during research conduction. Additional institute must provide support for data collection process. Supervisor should guide the students properly in tool selection and report writing. Courses content must be evaluated and recent material also uploaded with the passage of time, so students would be able to meet the global needs.

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