**SPCRD GLOBAL
PUBLISHING**
Sustainable Solutions

RAMSS Review of Applied Management
and Social Sciences

Journal homepage: <http://ramss.spcrd.org>

ISSN (Print): 2708-2024

ISSN (Online): 2708-3640

Challenges Faced by Novice Research Students at Undergraduate Level: A Qualitative Study at Institute of Education and Research

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ARTICLE DETAILS	ABSTRACT
History: Accepted 22 April 2021 Available Online June 2021	<i>This study was conducted to investigate the problems faced by Novice researchers at Institute of Education and Research, Punjab University Lahore. The study was Qualitative by nature. Seven B.Ed. Hons students were selected through purposive sampling as sample. For this purpose in-depth interview was used as instrument to collect data from the sample. Researcher herself conducted the interviews from Novice researchers. Data was collected, organized and analysed. Themes were generated from the data. Major findings of research were that novice researcher are lacking in expertise, confidence in conducting research, problems finding relevant literature and sample, analysing data and reporting properly.</i>
Keywords: Novice Researcher, Undergraduate, Challenges, Research Experience	
JEL Classification: C44, C49	

DOI: 10.47067/ramss.v4i2.142

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1. Introduction

Research at undergraduate level helps students to develop their personalities in a professional way. This experience equips students with in-depth knowledge of various things and techniques of research and its process. Student can implement these techniques in their class room to solve problems, and in real world context, they can find academic material and establish healthy relationship with the faculty. New researchers must be given more attention so that they may not find this process as difficult. In the present process large and growing number of research methods produced a mess, especially for novice researchers. A variety of literature has been presented in various types of literature which guides research types. But little studies have been made to indicate

the problems facing the new researchers. Heidi, Wayment & Laurie (2008) wrote that slight evidence exists about suggestions that departments might work on to improve undergraduate students' access to research experience. They identified five barriers in the existing program including lack of student awareness, unequal student access, poor curricular timing, lack of publicity, and irregular access for faculty.

Research system is to increase knowledge and understanding. In some postgraduate and graduate courses, research method is the subject of study; even students are aware of the importance of research and including intentions as articles in the curriculum. Taskeen, Shehzadi, Khan & Saleem (2014) believe that the investigation is primarily a way to respond to anger-raising questions. Research in educational field is imperative because it helps in knowledge progress, practical improvement and policy information. Therefore, teachers can use research results to improve their skills and teaching and learning processes. Research at undergraduate level can be conducted to cope with the minor classroom problems and to handle the sudden situations during the class. These results can be utilized by the professionals to improve their skills of teaching.

Undergraduate research establishes professional relationships between independent research, students and teachers, as well as study opportunities in the field of studies. Padmaja, Lasiemi and Reddy (2015) wrote that undergraduate surveys are a source for students to acquire knowledge about their knowledge and, through that teacher or supervisor, to study through the study. Padmaja et.al (2015) wrote that undergraduate research results could sometimes be published in an undergraduate research journal, such as student works or spaces. As a co-authored undergraduate research partner, dedicated to traditional academic journals, and with the help of many students, you stand out in a fun group of graduate students or in a graduate scholarship contest.

Teachers participating in undergraduate research perform two different functions. Faculty members can work as early investigation centers that conduct research and assist students. In other cases, undergraduate research is done by a student. In this case, faculty members work as a consultant to keep students on the track and provide support as needed. Desai, (2008) wrote that it is important how the institution see the relationship between teaching and research. And role of students and teachers in conducting research is also important and worth considering. Supervisor can range from peers to senior professionals. To improve the quality of research it is important to guide new researchers with full devotion without thinking them raw and without underestimating their work type or level. Leedy and Ormrod (2005) wrote that the new researchers can be stunned by the complexity of research methods.

Teacher is a guide to fulfill the purpose of research. The problems that novice researchers face are not at college or university level their routes are in secondary school, where students are given assignments on inquiry based learning and students complete it with fair and foul means it causes problems in future research field. Li and Lim (2008) concluded from many studies that students should be engaged in classroom for problem solving and inquiry based learning and to find and search knowledge on some assigned topics. This will enhance their competencies to find and select required knowledge. This inquiry based learning demands teacher to be a "fellow creator of knowledge" rather than an authoritative personality. Yeoh and Terry (2013) conducted a study in Australia to know the students' research experiences. They drew many inferences from the study that educational background, atmosphere, limitations of working create hurdles in the way of novice researchers.

Pietersen (2002) discovered the experience of learning qualitative research but he did not discuss anything about writing part. Becker (2009) discussed progress of National Science Foundation's attempt to promote qualitative research. Mehra, (2002) reported that when researcher is new in the field he may not know how to remain unbiased while conducting the research. This factor is a problem for innovative researchers. Belcher and Hirvela (2005), studying by Ely (1997) shows that the qualification experience is part of the original research experience. Their teachings show complex intellectual and emotional pressure, written text what their skills mean and what it means.

World is taking broader step in research to make it a large scale experience and try to conduct it online. As Desai (2008) gave a review of large-scale research-intensive community program at Texas A&M University that was in need to design new tools that include the works of maximize the efficiency of program, enhance relationships among people, and mix research and educational activities. There basic purpose was to develop an online communication system that can assist researchers to measure and monitor the activities of community. Study by Li and Searle (2007) has examined quality experiences, which analyzes the standard database. He has found that there are major problems in data analysis: to start with coding, do not diversify the category of researchers and actors, and explain about the evidence.

The Council of Undergraduate Research (CUR) is an example of a non-profit institute that balances this attempt to create, formalize, and expand undergraduate research opportunities. According to CUR, "institutionalizing a research program involves creating of a defensible undergraduate research program based on best practices, a community of faculty members and administrators that share a mutual interest in undergraduate research, and a culture that supports undergraduate research."

Apart from compulsory courses research is also taught that covers whole research theory, training for research. It is based on apprenticeship model where novice researcher's work with experienced researchers and thus burden of novice researchers lessened. It is evident from different research conducted by teachers or students that there are a lot of compulsory measures that are needed in making the research in the field of education a fruitful part. First, students work in supervision of their teachers to design their own projects. This enable student to participate in all aspects of the research project. At the same time it provides a sense of "ownership" as well as providing experience to higher-level logical thinking. Secondly, students find chances to explore their creativity and vision and as a result they have ability to control their research work. Thirdly, teachers devote significant amount of time providing not only expertise in research but also emotional and social support.

Finally, students receive methodological training and access to state of- the-art facilities and equipment. Tutoring in research is both time and resource demanding. Successfully maintained research system in any country flourish only if the universities continue two types of support: funding and expertise advice.

Now a days Pakistan research sector didn't have much consideration, this is the main reason that research culture at Undergraduate level is not much aligned. In the research sector universities teachers should have main and in-depth consideration in research methodology and other research perspectives and ask students to truly complete their research reports & projects. Another factor is

that lack of awareness and lack of publication opportunities in other words lack of journals for publication. This could be done if HEC and higher concerned authorities take these steps on serious note by publicize theories and findings regarding research and publications. Additionally, it's the duty of scholars and higher authorities to publish conducted research and it's the right of society and business persons to go through the published research regarding their problem and industry. Taskeen, et.al (2014) mentioned problems in pakistani research as lack of code of conduct, lack of assistance, lack of access to journals, and drop out of sample. They also noted that representative data is difficult to found and often researchers collect data from the people who are easy to find.

But need of the hour is to train students from the very start to be indulge in research and understand the importance of research in gaining knowledge. Students when understand the process of research will definitely inclined towards research as activity. Pakistan research culture is facing lack of understanding among undergraduate and graduate students, so students should introduce and aware with critical thinking analysis. Now day's students are mainly focus on just read out university provided material rather than explore and explain their own ideas and opinion with literature support. Initially students should familiar with research from start but in Pakistan start this at university level, even than at graduation level students just take research work just as a burden of having a good grade. But now it is getting familiar at undergraduate level in some institutes.

College research work can be introduced, so the student can find out how it works. Pakistan's education system is worse than the whole world, so students are being introduced from the current educational system. In addition, there are some research centers in universities that are not well equipped, so research is usually a low quality work. Another obstacle for investigative programs is especially important, and without funds cannot be enough funds. The government should start projects and funds to investigate such students as it is our country's development and success.

Research is the most required field in education now days. This is the only way to tackle the problems of educational system. Researcher did not found any in-depth study that can describe the challenges novice researchers face during the course of their work and how to handle those difficulties. Research is vital for Pakistani students to enhance their research skills. Problems of our educational system can be pointed out and solutions can be sought through research. This can be pointed out by conducting research at minor and major level. This study is need of the hour.

This study aims at exploring the problems faced by novice research students at undergraduate level in the Institute of Education and Research (IER), University of the Punjab Lahore. Undergraduate students are not as much prepared about research. Their concepts are not that much strong and they are new to the field and specific problems that they faced are need to be identified.

This study will be helpful for researchers and supervisors to cope with the challenges novice researcher are facing in conducting research. This work will help program designers to set some especial programs especially at undergraduate level that might guide novice researchers. This research will also be helpful for curriculum developer to develop such content in curriculum that may enhance critical thinking in students. To survive in a competitive research and technology era, Pakistan needs to develop an innovative and healthy research atmosphere for researchers. This research work is an attempt to point out the challenges that researchers confronted at the very start.

The objectives of the study are

1. To explore the perceptions of novice researchers about research.
2. To explore the difficulties that novice researchers face.

The Research Questions of the study are

1. What are the perceptions of novice researchers about research as a field?
2. What are the perceptions of novice researchers about research difficulties?

2. Research Methodology

This section includes research design, population, sampling, validity and reliability, instrument, data collection and data analysis. Basically there are two types of study qualitative and quantitative. Present study was qualitative in nature based on case study technique. This type of study is an empirical investigation which interrogates an existing phenomenon in a context of real life and by having some source of evidence.

2.1 Population and Sampling

IER undergraduate students of B:Ed Hons (96 total) were population of the study. Following the purposive sampling method sample was selected from population. Sample consisted on seven students (5 female & 2 male) who were in the process or conducted research. Sample was selected from the 8th semester of B:Ed (Hons.). These students had recently conducted research.

2.2 Instrument Development and Validation

Interview was used as instrument to collect data. It was a semi structured interview. Coping questions were asked to attain maximum details from the sample. Researcher herself conducted the interview with each member. After developing questions research experts were consulted to enhance the validity of instrument. The construct validity of the interview questions were assessed by experts in the field. The interview protocols were consulted from two experts having well awareness about monitoring and evaluation of research thesis. A mock interview was conducted to enhance the reliability of the instrument. This interview was not the part of the actual study.

2.3 Data Collection and Data Analysis

Data was collected through interviews. It was a semi-structured interview. Researcher conducted the interview by herself. Coping questions were asked to draw full information from the students. Data was analysed by arranging and organizing data. Then transcripts were prepared for all interviews. All related notes, documents, and other materials were gathered and arranged properly. Data was reviewed and explored. Initially coding was done. Codes were reviewed and revised. Themes were deducted and combined. Themes are presented in this report in a cohesive manner.

3. Findings

Interview was divided into demographic information, background of studies, and conducting the research. These sections are interpreted here separately. Each participant in this study was given codes as the initials of their name such as, AS, NA, SA and so on. For citing their wordings, the researcher in this paper has used these codes. As for the demography concerned all students were between the age of 20 to 25. And all of them were new to the research work. They were asked certain questions regarding problems faced while planning, conducting and reporting the research. The responses were coded and analysed thematically. Themes were interpreted which were related

to objectives and research questions. From the interview certain themes like, lack of knowledge of research, lack of access to related literature, huge misleading data, and problem of self-writing etc emerged. Phases of conducting research along with their drawn themes are given below.

3.1 Planning

First section of this part was about the planning of research. First question that was asked in this regard was, “How and why did you choose your topic?”

Three out of seven respondents said that they choose their topic by keeping in view their level of understanding about the phenomena. Two of the respondents selected the topic by keeping in view the convenience of conducting research. One researcher was conducting experimental work as she was interested in doing some field work. Respondent AS is of the view, “I wanted to do something real and exiting, so that I can learn more about the research as a field.”

Respondent NA answered, “It is very difficult and very important step in research. It took so much efforts of the researcher. First, researcher must understand his/her area of interest and grip on specific topic in relevant area.”

Secondly respondents were asked about “What kinds of problems you face while selecting your topic?” all of the seven respondents replied this question clearly.

Five out of seven respondents are of the view that selection of a topic was a tough work as if they wanted to do something different they were not appreciated as it was their very first experience of conducting the research. One respondent, IR, said, “For me, lack of interest in research is a huge difficulty to overcome”. One respondent was of the view, “to maintain focus is problem for me. I cannot focus on one thing for a long time”. Focusing on one phenomenon while selecting a topic was difficult for her, and many ideas keep on distracting during the process of topic selection.

SA said, “To select a new topic is difficult as researchers are unaware of how to select a topic and on the basis of what criteria they should choose it.”

One of the respondent felt that inadequate assistance was a big problem while facing the topic. As at this level many students have no idea which topic is researchable and which is not. “I think I was not satisfied from the guidance that I was getting about selecting a topic. When I have no idea what was worth doing”.

3.2 Conducting

Next question was about conducting the research. This section involve question “What type of problems you face while writing proposal and other parts of your research work?”

Writing a proposal was difficult by all respondents. All of the seven respondents fine it difficult and time consuming because it was their first experience. Four out of seven said that literature review was the difficult part of proposal.

They faced problem that appropriate literature was hard to find. Especially latest works were hard to find as there was lack of access to literature. Another problem that the researcher faced was huge misleading data that was available on internet. Two were of the view that concerned journals

were out of access. One complained about rude behavior of librarian. SA found librarian as not helpful in getting books what she wanted. She said, “Librarians get irritated when they have to issue different books again and again to the same user.”

Next question was, “What type of problems you face while collecting data?” That was responded in certain ways.

Data collection is an essential step of conducting research. Often experienced researchers also face lot of problems while collecting data. Novice researchers being new to research are also new to collect information from public. All seven researchers find it difficult to select tool for data collection and preparation of instrument was a difficult task for them.

They found at middle of collecting data that sample was not representing. One of them faced the drop out of sample during research. She was conducting experimental research. She said, “People who are taken as samples drop out from sample in many cases mostly when study period is getting longer. It affects the whole research study.”

Second issue was that some authorities are not willing to provide any type of record at the name of confidentiality. As NA said, “Trivial data is not provided by asking it confidential. A long process is prescribed of bringing letter from University and lot of other information.” Three out of seven complained about financial expenses in research work. They were of the view that being indulge in research was getting expensive.

3.3 Report writing

This section was about the final writing of research output. Respondents were asked, “What type of problems you faced while writing final report/thesis?” followed by a coping question to make clarity of the views of respondent, “Which part(s) are hard for you in writing the research report/thesis?” Data analysis was found difficult because of lack of statistical understanding, inappropriate data analysis techniques. Six of the seven researchers find it easy to write “findings” as it was based on data analysis tables, while one find interpretation of tables difficult as she was not very good in understanding figures and tables. Discussion and recommendation were found hard for report. Three out of seven respondents said that they found it difficult what to recommend about their work.

Table 1: Following themes were drawn from each interview question of this section.

<i>Interview questions</i>	<i>Themes</i>
1. How and why did you choose your topic?	<ul style="list-style-type: none"> • Understanding of the phenomena • Convenience of conducting research • Interest in field work
2. What kinds of problems you face while selecting your topic?	<ul style="list-style-type: none"> • Fear to select new topic being a novice researcher • Lack of focus on one phenomenon • Inadequate assistance
3. What type of problems you face while writing proposal and other parts of your research work?	<ul style="list-style-type: none"> • Lack of access to related literature • Huge misleading data on internet • Rude behaviour of librarian
4. What type of problems you face while collecting data?	<ul style="list-style-type: none"> • Development of instrument was difficult • Sample was not responding properly • Lack of access to records/confidentiality of records • Financial expenses
5. What type of problems you faced while writing final report/thesis?	<ul style="list-style-type: none"> • Lack of statistical understanding • Difficult to write conclusion • Discussion and recommendation were difficult to write

4. Discussion

The whole study on finding the problems of novice researchers at undergraduate level highlights many problems. Some of these are general problems that researcher face at any level of conducting the research. From selecting the topic to reporting the results each step is difficult and important. Researchers must have a grip on the area they are concerned with. Beside that they should be very good in self-writing so that they may present what they have drawn from their research. A research work is of no worth until it is used somewhere. And it will be used when it will be reported properly.

To select a topic respondents of this research were confused how and why to select a topic. It is not to be said that only novice researchers face this problem, but to focus on one phenomenon is a hard task for many experienced researchers as well. Research at this level should be key to gain more and more knowledge as Lasiemi and Reddy (2015) are of the view that undergraduate surveys are a source for students to acquire knowledge about their knowledge and, through that teacher or supervisor, to study through the study. Do not Trust In independent research, students will be able to feel confident and comfortable when performing tasks in their future careers.

There should be a strong relationship in teaching and research. Students should be prepared from the very start to find and write things so that they became familiar to collecting required information. Same pattern was suggested by Desai, (2008) who wrote that it is important how the institution see the relationship between teaching and research. And role of students and teachers in conducting research is also important and worth considering. Supervisor can range from peers to senior professionals. Li and Lim (2008) also established from many studies that students should be

engaged in classroom for problem solving and inquiry based learning and to find and search knowledge on some assigned topics. This will enhance their competencies to find and select required knowledge.

Problems of novice researchers are as inadequate assistance, rude behavior of librarian and lack of access to data is also found in Taskeen, et.al (2014). They mentioned problems in pakistani research as lack of code of conduct, lack of assistance, lack of access to journals, and drop out of sample. These are common problems that often researchers face, no matter at which level they are conducting research. Beside these problems researchers faced difficulty in preparing instrument of the study. They found it hard to make appropriate statements and required number of questions.

5. Conclusion

Based on the findings certain conclusions were drawn. In Pakistan students are not trained to find some information independently. Most of the students are trained in form of getting knowledge and information in books that they are provided. Collected data gave evidences that research seem to be a difficult task as they are not used to it. Research questions were based on the perception of participants about research. And about the problems they faced while conducting their first research project. Research was taken as time consuming and difficult task. Some researchers were of the view that it is challenging and interesting work. Respondents were asked about the problems they faced at each step of conducting research. While planning research novice researcher faced the problems like lack of confidence to select the new topic, lack of interest in research, and inadequate assistance. While writing the proposal respondents found it difficult to write related literature as they found lack of access, huge misleading data on internet and journals that were out of access for students. While collecting data instrument development, lack of responses and lack of availability of record were the major problems respondents faced. While reporting research output respondents found it difficult to write data analysis and recommendation. Lack of statistical understanding is faced by many researchers. To write conclusion was difficult for students as they were not in habit of writing beyond text books. Our students are not trained nor encouraged to self-writing. Their whole qualification based on rote memorization. This practice harms their ability to express their own thoughts and feelings. Lack of access to related literature is another problem, and if students consult internet they find huge misleading data on internet that is neither authentic nor acceptable in any type of research work. Rude behaviour of librarian is also complained. It is also complained that often very trivial data is not provided to the researchers at the name of confidentiality. And behaviour of officials is very rude to researchers.

6. Recommendation

Based on the drawn conclusion following points are recommended

1. Research at this level should be group work. So that students may share the burden of new work and together they can understand properly.
2. Knowledge on the research methodologies should be given at secondary level; students should be encouraged to find related information from other sources then merely using textbooks.
3. Sufficient skills of self-writing should be developed in students from the very start, so that students may not find it difficult to write the output of their research.

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