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Identification Of Motivational Factors for Conducting Academic Research Among University Researchers: A Case Study of PMAS-Arid Agriculture University Rawalpindi

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Abstract: *Universities research has become an essential component of higher education and researchers' motivation and their output of research are thought to be strongly correlated. The main purpose of this study was to identify the driving forces behind PhD scholars' decisions to pursue research at PMAS Arid Agriculture University in Pakistan. The nature of the research was exploratory and Nominal Group Technique was applied, to a nominal group of 15 academic scholars. The Nominal Group approach was used in different steps (idea generation, selection, listening, clarification, and ranking and consensus stages). The NGT's results were classified into five categories: social recognition, supervisor support and coordination, intended outcomes, theoretical preferences, and a sense of achievement. Participants gave less preference to the element that their interest in research activities inspired them to conduct research and more preference to the factor that acknowledgement from society was an incentive for them to undertake research.*

Key Words: Academic Research, Motivation, Nominal Group Technique, Research Output, Social Recognition

Introduction

Every research begins with initial ideas that have been developed and inspired to address a variety of contexts and scenarios. Research has become a crucial part of higher education in both rich and developing nations in the modern era. Higher education institutions all around the world place a lot of emphasis on their scholars' research efforts. There may be a variety of things that help to increase these universities' research output. Research in higher education makes use of scientific analysis methodologies to enhance educational planning, decision-making, teaching and learning, curriculum creation, understanding of children and youth, use of instructional media, school organization, and education management (Boykin, 1972). It is believed that there is a strong correlation between researchers' motivation and their research production (Lohela-Karlsson et al., 2022).

Research is another methodical approach to recognizing various issues, addressing their effects, and locating solutions. After doing a thorough analysis and conducting a relevant factor study, research is a process for identifying a solution to a problem. Generally speaking, research is a method created to ensure that the information obtained is reasonable and supported with the use of

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quantitative and qualitative data, including a scientific approach. It includes developing research methodologies, gathering, describing, and reporting data and factual information. Therefore, research may seek remedies for problems or problems that are unknown. Institutions of higher education are responsible for giving people advanced knowledge and improving their research abilities. Universities give a lot of attention to the research activities and research output of their students and faculty as well. The research output of universities is also responsible for their rankings and performance evaluation. The research output of universities may be enhanced by a number of factors. Responsible conduct of research improves its quality. Higher education, particularly doctoral research, is attracting special attention as institutions and governments work to expand and enhance their research bases. Without a doubt, postgraduate and doctorate research has an impact on a nation's research output, which has an impact on the community. Doctoral-level research serves as the breeding ground for a profession's theories and methods (Bates, 1999). According to Baron (1983), there is a strong correlation between motivation and job performance. Performance and motivation are inversely correlated with one another. Motivated individual directs their efforts toward achieving certain goals because they are aware that they must be attained in a certain way (Nel et al., 2001). The third tier of university education, doctoral studies, should help researchers learn how to focus on research, methodology, and scientific work strategies through their focus and content. Each discipline has distinctive traits that influence the research topic on which it focuses methodologically. The study of education research supports this. The purpose of educational research is remarkable in that it aims to systematically describe, analyse, and clarify the phenomena of educational reality, from which various methodologies and approaches flow. It concentrates on individuals and their potential as well as the constraints placed on the growth of educational postulates (Wiegerová, 2016).

According to Diamantes (2004), research motivation is influenced by a variety of external factors, including researchers' work, working conditions, ability to influence academic decision-making, employment security, freedom, and career advancement. There is a strong relationship between motivation and research. In modern educational research, motivation has gradually attracted the attention of educators. Increased research productivity is linked to factors like adequate time, internal motivation, formal orientation, a supportive network of foreign colleagues and a culture which promotes research (Bland et al., 2005). Motivation is considered a driving force for people's initiatives to achieve their objectives. Understanding academics' research motivation and its relationships with research output are important given that university academics throughout the world are increasingly required to provide research output in esteemed publications for both individual and institutional advancement. Research motivation can be seen as a key element affecting university research output, and more specifically, public academic actions in prestigious national and worldwide journals. The previous study on the scientific system has examined how many extrinsic and internal variables impact the desire to conduct research. The key source of knowledge and human capital for delivering higher education and disseminating knowledge across a sizable population of societal members in universities. Universities encourage the pursuit of knowledge and support research initiatives. Additionally, universities have been commercializing academic research through partnerships and connections with other organizations and corporations (Meyer, 2003). Any student's motivation is the primary factor in determining how well they will do in school. Motivational variables are essential for progressing at the doctoral level, not only for starting and continuing one's doctoral studies but also for successfully preparing and defending the dissertation. In order to finish one's studies, one essential component is motivation, in other words. As a result, tools have even been created just to measure these

elements (Litalien, Guay, & Morin, 2015). There are many different things that might affect motivation. Future plans and career objectives are typically examined as the primary driving forces for choosing to start PhD studies as they are components of the person's larger life context (Wellington & Sikes, 2006). A doctoral degree is typically pursued for personal reasons and professional advancement, according to different research (Guerin, Jayatilaka, & Ranasinghe, 2015; Kowalczuk-Waldziak, Lopes, Menezes, & Tormenta, 2017).

Since the early 1970s, productivity studies have become more significant in higher education. The number of publications in academic journals with peer review and scholarly books is typically used to measure the productivity of faculty researchers (Denton et al., 1986). There are times when grant applications, awards, and grant amounts are also included, along with the number of presentations at professional meetings (Wilson, 2001). The most effective technique to evaluate researcher effectiveness is through research output. Numerous studies of various kinds have looked at elements influencing universities' production, whether in terms of faculty, individual academic programmes, or both (Dundar & Lewis, 1998).

According to Hagedorn's (1999) research, age and experience appear to be highly connected with productivity, with age and experience improving production up to a certain degree (Levin & Stephen, 1989). Teaching and research are both required components of academic life in today's universities, where furthering knowledge through research and publishing the findings is viewed as the core mission of every higher education institution (Arimoto, 2014). Horodnic and Zait (2015) note the positive association between academic research and motivation, pointing out that academics who are motivated by internal factors are more productive than those who are influenced by external motivators. This is true in terms of motivation, interest, and self-efficacy. Research fosters curiosity and offers pertinent solutions to challenges, claims Memon (2007). One issue is that only a select number of individuals participate in research-related activities. Lack of facilities and funds for research are other issues that impede the growth of research culture. The supply of research funding to Pakistan's public institutions is an attempt to address these issues, but the outcomes have not been up to par. These issues relate to institutional, environmental, and individual elements.

Environmental factors make it easier for faculty and student researchers to apply their unique traits in ways that increase the output of their research. According to Bland, Center, Finstad, Risbey, and Staples (2006), environmental factors for doctoral research development include collaborative situations, mentoring, supportive group environments, communication between research scholars and department heads, and the availability of resources and facilities. University policies, missions, and goals are examples of institutional influences. It entails setting up research-focused workshops with regard to publishing and boosting the volume of research articles (Meigounpoory & Ahmadi, 2012). Personal characteristics include encouragement for research activities, research expertise, and research experience (Meigounpoory & Ahmadi, 2012). Due to a lack of research skills, some researchers choose not to pursue research activities. It is necessary to set up research skills development programmes for both faculty members and student researchers (Salazar-Clemena & Almonte-Acosta, 2007). According to Braunerhjelm (2007), Universities help the economy of the nation and the growth of enterprises and industries through this process. But this new function of commercialization and knowledge transfer differs from the traditional function of instructing and educating. Universities are institutions where teaching and research are combined to advance knowledge and appreciate civilization.

The culture of research includes transdisciplinary and disciplinary goals and beliefs, as well as an environment that fosters

researchers' success as distinctive persons with their own research capacities. It also involves academics' excitement for working on research initiatives (Evans, 2007). The environment that motivates academics to conduct research in higher education institutions is known as the "research culture." A company's research culture may be defined as the way we do research there (Rao, 2003). There are a number of articles published in reputable international journals and conference proceedings, which serve as a common channel for disseminating research and development activities among researchers, and determine how productively most universities around the world conduct their research (Brookes & German,1983). According to a study, the research quality in Pakistan is of great importance and many factors are involved in how institutional and supervisory guidelines are paramount to research quality. The level of research quality oversight in Pakistan needs to be improved (Mahmood, 2011).

An essential aspect affecting the research output of university academics might be considered to be motivation for research. So this aimed to explore the university academics' research motivations in order to enhance their research productivity.

Research Question

What are the factors that motivate PhD researchers to conduct research at PMAS Arid Agriculture University, Rawalpindi, Pakistan?

Objective of the Study

The main objective of the study was
To identify the motivational factors that motivate a PhD researcher to conduct research at PMAS Arid Agriculture University, Rawalpindi, Pakistan.

Research Methodology

The study is exploratory in nature as it aimed to explore or identify the motivations for academic researchers to perform scientific studies at PMAS-Arid Agriculture University, Rawalpindi.

Sample

The Nominal Group (NG), a randomly selected group of 15 PhD academic scholars conducting educational research in the Department of Education at PMAS Arid Agriculture University in Rawalpindi, served as the sample. The Demographics of the selected participant is represented in table 1.

Table 1. Demographics of the Participant

Gender	
Male	7
Female	6
Age Group	
20-30 years	6
Above 30 years	9
Profession	
Teaching	11
Non-Teaching	4

Research Technique

Applying the Nominal Group Technique, data was gathered (NGT). The nominal group technique was chosen because it collects the researcher's point of view through in-depth drilling. The nominal group approach is a participative activity that can be used in small groups to reach a consensus and agreement on a certain issue (Maguire et al., 2022).

A nominal group is a useful tool for making pooling decisions in face-to-face groups (Delbecq et al., 1975). To prevent group members from consulting with one another, they were assigned seats apart. This procedure made sure that each participant had an opportunity to consider the desired response to

the question.

Different phases of applying NGT were created.

- All of the participants received an introduction to the study's topic in the first phase. Following the introduction, the members were instructed to write as many ideas as they could in response to the statement or question asked. They received clear instructions on how to express their ideas in writing based on their own personal beliefs. The researcher made sure that participants did not share their thoughts among themselves. They wrote all of their ideas on a piece of paper.
- In the second phase, the researcher instructed the participants to select the ideas which they think are most appropriate in answer to the asked question. All the participants have chosen the three best ideas.
- In the third step, participants were given the opportunity to revise, improve and select the best ideas. The researcher took note of the suggestions made by the participants.
- Clarification was the fourth stage. At this stage, the researcher clarified the data, merged the same ideas and eliminates duplication of the repetitive ideas. Five themes were created based on the ideas gathered, and thoughts were presented within each theme. The themes are
- Social Recognition
- Supervisor support and Coordination
- Intended Outcomes
- Research Resources and Methodological Preferences
- Sense of Achievement & self-interest
- The final step was to assess and interpret the data that had been gathered. So the researcher asked participants to rank all the ideas according to their priorities under each category. After collecting ranks the ideas collected were analyzed further by the researcher.

Data Analysis

The ranked data was analyzed on SPSS using simple means.

Findings And Conclusion

The results generated from NGT were organized under five categories which are

Social Recognition as a Motivational Factor for Conducting Research

- Top priority was given to social recognition as a motivational factor for conducting research with a mean value of 1.8.
- The second-ranking was given to serving the society in future as a motivational factor for conducting research as the mean value of 2.0 shows.
- According to the mean value of 2.1 higher social ranks were the third priority of the participants under the umbrella of the social recognition category.

The above results show that social recognition is an important factor which motivates university researchers to conduct research. Research scholars are highly motivated to conduct a scientific studies in order to be recognized socially. Results show that researchers are also motivated to conduct research to serve their society and achieve higher ranks or positions in society.

Supervisor Support and Coordination as a Motivational Factor For Conducting Research

- A positive attitude of the supervisor towards researcher research activities was the top priority motivational factor under the second category with a mean value of 2.3.
- The second priority was given to the coordination of the supervisory committee as a motivational factor to conduct research with a mean value of 2.5.
- Proper time allocation from the supervisor was the third priority with a mean value of 3.2.

Supervisor support and coordination were

other motivations for the academic researchers as indicated by the results in the second category. Participants claimed that a positive attitude and coordination of their researcher towards research activities also played an important role to motivate them to conduct research. Proper time allocation for research-related activities also motivates researchers to conduct research at the university.

Intended Outcomes as a Motivational Factor for Conducting Research

- Under the category "Intended Outcomes as a Motivational Factor for conducting Research" future performance evaluation was a top priority with a mean ranking of 2.2.
- The second ranking was given to future contributions in HEC with regard to academic research with a mean value of 2.4.
- Getting Higher education as a motivational factor for research was the third priority with a mean value of 2.6.

According to the results presented in the category of "Intended Outcomes as a motivation for conducting research" participants claimed that they are motivated to conduct research for their performance evaluation. Getting higher education and contributing to Higher Education Commission are the factors which also motivate academic researchers to conduct research.

Research Resources And Methodological Preferences as a Motivational Factor For Conducting Research

- Research methodology and theoretical framework were the first priority in this section (mean 2.1).
- Conducting quality research was another motivational factor with second priority in this category with a mean value of 2.2
- The third ranking was given to the theoretical framework and targeted approach as a motivation for conducting research with a mean value of 2.8.

Participants were also motivated to conduct research due to methodological preferences according to the results present under the fourth category. They were motivated to conduct research because of their methodological preferences and theoretical framework. The targeted approach and conduction of quality research were the other motivations for the researcher to conduct research at the university.

Sense of Achievement & Self-Interest as a Motivational Factor for Conducting Research

- Curiosity and self-satisfaction were the first priority in this section with a mean value of 2.0
- Interest to explore new ideas was the second-ranking priority with a mean value of 2.2
- The last priority in the category and overall was given to finding solutions to problems as a motivation for conducting research with a mean value of 3.3.

According to the results presented in the fifth category, participants claimed that their own curiosity and self-satisfaction motivated them to conduct research. They also claimed that their interest to explore new ideas motivated them to conduct research at the university.

Discussion

Research now a day is an important component of higher education institutions. Universities encourage the pursuit of knowledge and support research initiatives. Today's universities in Pakistan see research as a crucial part of their mission. Pakistan's Higher Education Commission (HEC) is focused on encouraging research in higher education institutions. Keeping in view these factors there was a need to identify different motivational factors that motivate an academic researcher to conduct research at a university. The rankings above show that there are numerous motivational factors that encourage or motivate an academic researcher to conduct research at a university.

The findings show that social recognition

was the most significant motivational factor to conduct research according to academic researchers. These findings are supported by Tien (2008) who found that achieving social esteem and recognition are key drivers of research motivation. Support of the supervisor and intended outcomes are the other factors ranked by participants of NG to motivate academic researchers. These conclusions are supported by Curtin, Stewart, and Ostrove's (2013) assertion that proper and attentive research supervision is essential to graduate students' success in the classroom and in their careers. Roberts and Seaman (2018), found that effective supervision occurs when the supervisor and the student have similar research interests. When supervisors provide guidance and encouragement without compromising the student's ownership of the project, it helps researchers improve academically and personally. The least preference was given to findings solutions to problems as motivation for conducting research and it seems that there is a need to promote responsible research culture in universities in order to enhance researcher's motivation and sense of responsibility so they can be encouraged towards research to find out the solutions of different problems related to their education and society. Deci and Ryan (2000), who noted that interest and a sense of accomplishment are identified as greater motivation factors, support these findings. "Interest and enjoyment are the primary emotions that accompany intrinsic motivation," they said in their conclusion.

Recommendations

On the basis of the conclusions following recommendations can be drawn.

- Universities should introduce a motivational plan and policy for motivating academic researchers in order to improve their research output.
- Universities should focus on promoting research oriented culture in order to motivate researchers towards research.
- Universities should arrange research-related funds, rewards and scholarships to motivate academic research for conducting quality research.
- Universities should establish a separate wing to deal with research-related problems of the researchers in order to motivate towards responsible research conduct.

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