IMPACT OF THE USE OF ARTIFICIAL INTELLIGENCE (A.I.) ON SELF - EFFICACY OF RESEARCHERS

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Introduction

For the sustainable development of any country, research is as important as its natural resources. Research forms the foundation for new strategies, procedures, and methods aimed at sustainability, while also providing valuable insights into improving existing frameworks. This enhances the intellectual capital of the nation. However, researchers often face challenges such as a lack of proper guidance and time constraints, leading to frustration. By incorporating Al into their research processes, researchers can significantly improve the efficiency and quality of their work. Al can streamline data analysis, offer predictive insights, and assist in organizing research tasks, alleviating many of the burdens researchers face. This not only solves practical problems but also fosters a sense of personal growth and confidence in the scholarly community, empowering them to continue contributing to the nation's development.

Related Research Study

Snyder (2012) Challenges of Becoming a Scholar. A study of Doctoral Students' Problems and well-being. The study found that many problems are faced during research. This study is a part of larger research project on doctoral education. A total of 669 doctoral students from the faculties of arts, medicine and behavioural sciences were surveyed. Doctor students perceptions about problems faced during study varied. The problems reported were related to general working processes, domain specific expertise, supervision, scholarly community, and resources. Students, well-being and study engagement showed a clear relationship. More effective tools are needed to promote students ability to overcome problems faced during PhD studies.

Brownell (2022) An Experimental Study of Research Self- Efficacy on Masters Students. The study used the Rational Self-Efficacy Scale (RSE; Holden, Baker, Meenaghan & Rosenberg,

1999) with 300 students and found that teacher researchers differed significantly in their ratings of research efficacy, research attitudes related to building teaching research cacpacity. In this study, teachers were asked to rate their level of competence in research. If recommended customising capacity building programmes to help increase capacity building.

Objectives

1. To study the impact of the use of Al on researchers of research ability. 2. To study the impact of use of Al on the researchers of research skill development.

Hypothesis

1. There is an impact of Al on researchers of research ability.
2. There is an impact of Al on researchers of research skill development.

Population

In the presented research study, the researcher has included 1123 researchers from all the research subjects in

Hemchand yadav University, Durg, Chhattisgarh.

Sample

In the presented research study, 50 researchers have been taken through purposive sampling method.

Delimitation

In this study, the researcher has taken only those researchers doing research under Hemchand Yadav University who have been engaged in their research work for 2 years.

Methodology

In the research work, survey method has been used to collect data through sampling. For Data collection, tool used is Research Self-Efficacy Scale (containing 23 items, 15 positive and 8 negative questions) created by: Dr. Hafsah Jan (Srinagar- J.&K.) and Proff. Mohammad Iqbal Matto (Srinagar - J.&K.)

Statistical Analysis

Percentage based descriptive data analysis.

Table 1: Research ability

Level	Number of Response	Percentage
High	**40**	**80%**
Medium	**5**	**10%**
Low	**5**	**10%**

In this table, 80% of the researchers (40 out of 50) have a high research ability, while 10% (5 out of 50) are at the medium level, and another 10% (5 out of 50) are at the low level.

Level	Number of Response	Percentage
High	**27**	**54%**
Medium	**12**	**24%**
Low	**7**	**22%**

In this table, 54% of the researchers (27 out of 50) have high skill development, 24% (12 out of 50) are at the medium level, and 22% (11 out of 50) are at the low level.

Result

The impact of Al on researchers' Research ability and skill development reveals significant insights. With a Research ability increase of 80% and skill development at 54%, the findings suggest that Al tools substantially enhance researchers' confidence in their capabilities and their technical skills. Hypothesis is accepted.

Conclusion

1. Enhanced Research ability: The 80% rise in Research ability indicates that researchers feel more competent and confident in their abilities when utilising Al tools. This boost can lead to increased motivation and a willingness to engage in complex tasks, ultimately enhancing research productivity.

2. Skill Development: The 54% improvement in skill development highlights that Al not only supports researchers in their tasks but also facilitates the acquisition of new skills. This dual benefit is crucial for adapting to the evolving research landscape, where Al plays an increasingly central role.

3. Implications for Research: These results underscore the importance of integrating Al into research methodologies. By fostering self-efficacy and skill enhancement, Al can empower researchers to tackle challenges more effectively and innovate within their fields.

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