

Identification and Explanation of the Components and Dimensions of Research Self-Efficacy

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Introduction

Universities are recognized as essential drivers of sustainable development and play a pivotal role in addressing complex societal challenges through research and the cultivation of highly skilled scholars. This role is particularly salient at the postgraduate level, where advanced education is closely integrated with independent academic inquiry. The success of postgraduate research, however, extends beyond the acquisition of technical competencies and is profoundly shaped by psychological and motivational factors, among which research self-efficacy holds a central position. Grounded in Bandura's social cognitive theory, research self-efficacy refers to an individual's belief in their capability to effectively perform research-related tasks (Vahdatzad et al., 2017). Empirical evidence suggests that students with higher levels of research self-efficacy demonstrate stronger motivation, confidence, and persistence when confronted with academic challenges. Conversely, many postgraduate students, particularly within Iranian

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universities, struggle with limited research self-efficacy (Seyed Nazarloo et al., 2022). Such deficiencies frequently manifest as avoidance of research tasks, excessive dependency on supervisors, apprehension toward academic writing, and difficulty initiating or completing research projects. Contributing factors include lack of intrinsic motivation, poorly organized research environments, and insufficient institutional or supervisory support. Moreover, the predominance of teaching-oriented practices within many academic departments often undermines the systematic mentoring and guidance necessary for fostering research competence.

While international studies have examined the structure and dimensions of research self-efficacy (e.g., Livingi et al., 2021; Howard, 2021; Sunal, 2020; Qiu et al., 2019; Sun et al., 2018), empirical investigations in Iran remain limited. Existing research rarely addresses the construct from a localized and applied perspective, and a comprehensive model for enhancing this ability among postgraduate students has yet to be developed (Hamidifar, 2018). To address this gap, the present study seeks to identify and elucidate the key components of research self-efficacy among postgraduate students at Islamic Azad Universities in Hormozgan Province. The anticipated findings are expected to inform targeted educational strategies and policy interventions aimed at strengthening students' confidence, enhancing research productivity, and improving academic outcomes at both institutional and national levels (Hessam et al., 2021).

Methodology

In this study, a qualitative research design was adopted, employing inductive content analysis with systematic coding procedures. Data were collected through interviews, with the researcher serving as the primary research instrument. The study population included experts, faculty members, and research deputies from universities across Hormozgan Province. Purposive sampling was applied, guided by the principle of maximum variation. Data saturation was achieved after conducting 20 interviews.

Findings

Research Question: What are the key dimensions and components of research self-efficacy among postgraduate students at Islamic Azad University?

Based on the interview data, open codes were initially extracted and subsequently grouped through axial coding to identify core concepts. This process employed the constant comparative method, whereby similar and distinct codes were systematically categorized to form independent and meaningful themes. Each core concept encompassed one or more related open codes, which are systematically presented in tables. Given that the study pursued two main objectives, axial coding

was conducted separately for each. The frequency of codes associated with each objective reflects their relative importance from the participants' perspective—specifically, in this case, emphasizing the components of research self-efficacy.

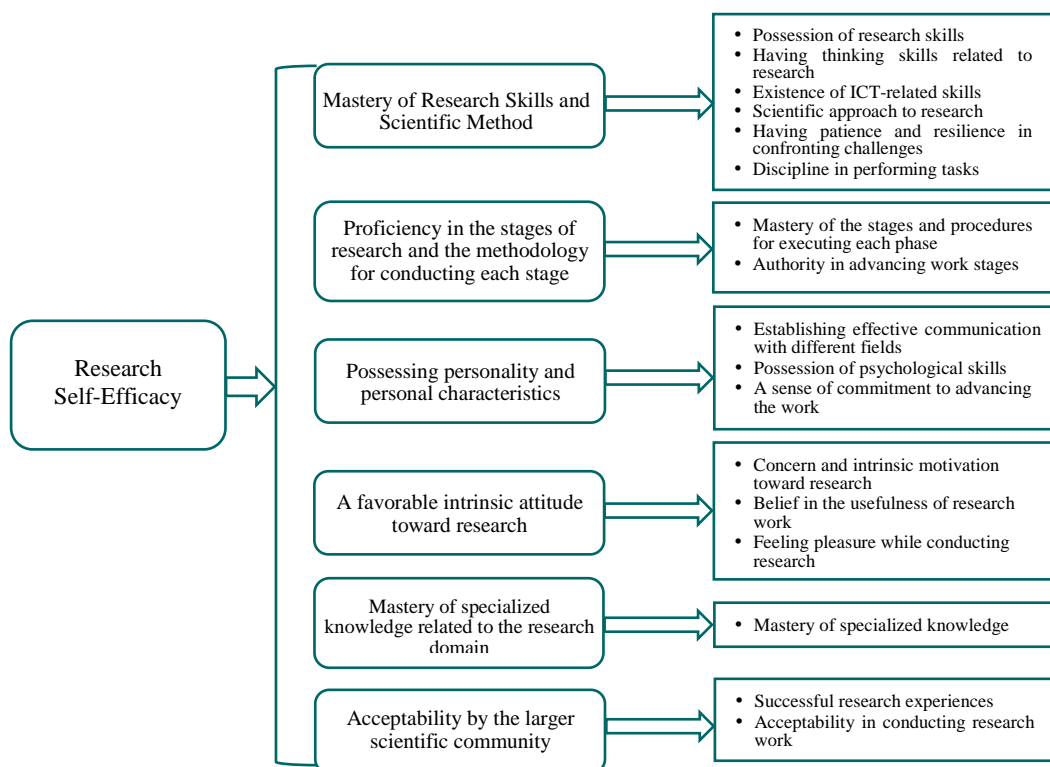


Figure 1. Dimensions and components of research self-efficacy among students

Conclusion

The findings of this study revealed six principal components of research self-efficacy among postgraduate students: (1) mastery of skills and scientific methods, (2) mastery of research stages, (3) personal traits and communication skills, (4) a positive internal attitude toward research, (5) subject-specific knowledge, and (6) validation from the scientific community. Among these, the three most salient components were mastery of skills and methods, a positive internal attitude, and subject-specific knowledge. Mastery of research-related skills — including academic writing, methodological proficiency, statistical analysis, and literature review — constituted the core dimension of self-efficacy, as it enables students to

navigate the research process with confidence and to engage in advanced levels of analytical and critical thinking. A positive internal attitude, encompassing motivation and personal interest in research, exerts a significant influence on students' willingness to participate in research activities and to persevere in the face of challenges. This finding is consistent with Self-Determination Theory, which underscores the role of intrinsic motivation. Subject-specific knowledge further contributes to accurate topic selection, rigorous theoretical framing, and effective problem analysis, thereby reducing cognitive load and enhancing the depth and quality of research. The remaining components, though of secondary importance, function as critical supportive factors. Mastery of research stages ensures the capacity to conduct systematic and coherent investigations. Personal attributes such as perseverance, responsibility, and communication skills are indispensable for collaborative endeavors and the dissemination of findings. Finally, validation from the academic community, achieved through constructive feedback and recognition, reinforces motivation and strengthens confidence.

In conclusion, the findings suggest that the enhancement of research self-efficacy requires more than technical training. Therefore, universities are advised to implement integrated support mechanisms, including:

- Specialized workshops,
- Robust mentorship programs, and
- Authentic research opportunities,

with the aim of cultivating both competence and confidence among postgraduate researchers.

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