

Development of a Research Competency Training System to Enhance Teachers' Research Skills in Indonesia Based on the Dick & Carey Development Model

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Abstract

Received: 1 Juni 2025 Revised: 15 Juni 2024 Accepted: 3 Juli 2025	In Indonesia, teachers' ability to conduct research remains below average due to a lack of research knowledge and experience. As a result, teachers rarely engage in research and have not published scientific papers. Therefore, mentoring in the form of formal training is necessary to enhance teachers' research competencies. However, there is currently no structured training specifically designed to improve teachers' research skills. This study aims to develop a training system that will improve teachers' research abilities. The research and development process follows a modified Dick & Carey development model. As a result, a training system, including training modules, agendas, teaching books, and learning videos, has been developed and tested by experts. This training system is expected to be used by teachers in Indonesia to enhance their research skills, encouraging them to become more actively involved in research and produce scholarly publications.
Keywords:	Development, Research Skills, Development Model
	Abstrak Di Indonesia, kemampuan guru dalam melaksanakan penelitian masih tergolong rendah, disebabkan oleh kurangnya pengetahuan dan pengalaman dalam penelitian. Hal ini mengakibatkan guru jarang melakukan penelitian dan belum pernah mempublikasikan karya ilmiah. Oleh karena itu, dibutuhkan pembimbingan melalui pelatihan formal untuk meningkatkan kompetensi penelitian guru. Namun, hingga saat ini belum ada struktur pelatihan yang dirancang secara khusus untuk meningkatkan kompetensi penelitian guru. Penelitian ini bertujuan untuk mengembangkan sistem pelatihan yang dapat meningkatkan keterampilan penelitian guru. Proses penelitian dan pengembangan ini menggunakan model pengembangan Dick & Carey yang dimodifikasi. Sebagai hasil dari pengembangan ini, sebuah sistem pelatihan yang mencakup modul pelatihan, agenda pelatihan, buku ajar, dan video pembelajaran telah dirancang dan diuji oleh para ahli. Sistem pelatihan ini diharapkan dapat digunakan oleh guru di Indonesia untuk meningkatkan keterampilan penelitian mereka, sehingga dapat mendorong mereka untuk lebih aktif dalam melaksanakan penelitian dan menghasilkan publikasi ilmiah
Kata Kunci:	Pengembangan, Keterampilan Penelitian, Model Pengembangan
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INTRODUCTION

In the context of education, teachers play a critical role in shaping the academic and professional development of students. However, in Indonesia, the ability of teachers to engage in research remains underdeveloped. This is primarily due to a lack of adequate knowledge and experience in research methodologies. Consequently, many teachers seldom undertake research activities and have not contributed to scientific publications. The absence of a robust



research culture among educators limits the overall advancement of the teaching profession and its contribution to educational improvement....

LITERATURE REVIEW

In Indonesia, education quality continues to fall short of expectations. The limiting factor is a lack of funds (Tandberg, 2010; Talaia, Pisoni, & Onetti, 2016; Peiris, 2013; Suryani, 2015; Marti, 2012; Ardiansyah, 2013) and teachers who are not yet a priority in education (Tandberg, 2010; Talaia, Pisoni, & Onetti, 2016; Peiris, 2013; Suryani, 2015; Marti, 2012; Ardiansyah, 2013). Teachers are critical to educational performance (Alawiyah, 2013; Aeni, 2015), with high-quality teachers having a significant impact on students' PISA (Program for International Student Assessment) results in Finland (Silander, 2013). This is in contrast to the situation in Indonesia, where teacher competency is still poor and minimal in creating learning innovations. Learning innovation is a result of a teacher's ingenuity as a learning architect. Changes in the use of learning methods, variations in the use of learning media, and even the ability to design new learning methods and media are all examples of innovation. Teachers in Indonesia are unable to design new learning methods and media, and even when they are used, they need to be improved. The quality of the learning process has a significant impact on student learning success (Marzano, 2003; Hattie, 2009; Walberg, 2006). Teachers are encouraged to increase their abilities to manage learning on a continual and systematic basis (Silander, 2013).

METHODS

A development approach, a modified Dick & Carey development model, was employed as the research method (Fig. 1). The Dick & Carey model is integrated with the ADDIE model, as well as some crucial parts and inputs from the ARCS model, to create this development model's grand design. This model focuses on the training implementation strategy, specifically the use of collaborative learning and collaborative research in the implementation of learning, as well as the elements of the arcs strategy development (Attention, Relevance, Confidence, Satisfaction) in learning and adult learners' involvement. Because the Dick & Carey model does not have a separate section for analysis, the analysis portion is based on a modified ADDIE model that incorporates the students' analysis of the Dick & Carey model. Richey and Nelson (2000....

RESULTS & DISCUSSION

Results

The need analysis is an important aspect of development research. Analysis of needs is done through interviews with education and learning experts, including Prof.....

Discussion

In completing this research, the teacher competency enhancement training system is expected to meet the needs of Indonesian teachers, particularly in terms of researching competencies. There has been no training system related to research competencies for instructors in published scientific journals. If there is any research on teacher competence, it focuses on the learning process (Burgener & Barth, 2018; Varghese, Vernon-Feagans, & Bratsch-Hines, 2019; Verner, Massarwe, & Bshouty, 2019; Karababa & Caliskan, 2013), the use of various media learning (Nousiainen, Kangas, Rikala, & Vesisenaho, 2018; Far (Kim, Xie, & Cheng, 2017). This demonstrates that

CONCLUSION

This study has highlighted the critical need to enhance teachers' research competencies in Indonesia, given the current gap in research knowledge and experience among educators. The development of a structured training system is essential to empower teachers, equipping them with the necessary skills and confidence to engage in research activities and contribute to academic discourse. By addressing the lack of formal training and mentorship in research, this study has successfully developed a training system that includes comprehensive modules, agendas, instructional books, and learning videos, all designed to improve teachers' research abilities. Through the use of the modified Dick & Carey development model, the training system has been systematically designed to ensure its effectiveness and relevance for teachers in Indonesia. The involvement of experts in testing and refining the system ensures that the developed materials are both practical and aligned with teachers' real-world needs. This training system, once fully implemented, has the potential to significantly improve teachers' research skills, fostering a culture of research within the educational community and encouraging teachers to actively contribute to the body of scholarly knowledge.

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