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Book Review – *A 101 Action Research Guide for Beginners*

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A 101 Action Research Guide for Beginners (2024) by Saba Ahmed is a practical book for novice action researchers, particularly in STEM (science, technology, engineering, and mathematics) education. The book's title indicates its purpose - to demystify research terminology and provide concrete examples of action research in practice. This guide opens a gate for educators and practitioners looking to engage in action research for the first time or after a significant break from academic research.

Each of the book's eight chapters focuses on a key aspect of action research. Chapter one sets the context for the rest of the book by exploring contemporary STEM teaching. Chapter two provides important tips on academic and reflective writing and essential skills for action researchers. The following two chapters, three and four, address the fundamental research terminology and introduce data collection methods. Chapter five deals with the crucial aspect of maintaining quality assurance in research projects. The author provides practical examples to help the readers better understand the transformation of theoretical concepts into real-world research. Chapters six and seven present the readers with a sample research proposal and a complete exemplar STEM lecturer action research project, respectively. Chapter eight examines the significance of developing research skills starting at the undergraduate level, emphasizing the long-term benefits of STEM practice.

Ahmed's approach of explaining complex research concepts in simple terms is particularly valuable for beginners or those returning back to research after a long break; it demystifies the research process and makes it less intimidating for novice

researchers. This guide contributed to action research literature by connecting theory and practice, and it's a key strength of the book.

> All educators new to teaching will be exposed to many "…isms" (behaviourism, humanism, constructivism, cognitivism) where teachers will be confronted with unravelling how theories are consequential in course delivery, to improve the learner experience and their teaching pedagogy. Each teacher is different, and the pertinence of each learning theory will differ. Some may find humanism elements more useful, and yet others may favour constructivism (this is to be expected). Yet all teachers need to demonstrate an understanding and openness to other learning theories, because unexpectedly it could add value if not now then potentially in future practice. Teaching practice is a spectrum. By learning the foundations of each theory teachers/ lecturers can pick and choose the level and degree to which it permeates into their teaching delivery, and on how they can affect action research projects. (p. 5)

Since there is an increase in education on STEM and evidence-based practice in these STEM fields, this guide is relevant, especially now. The examples and case studies from STEM disciplines can help educators improve their instruction and learning outcomes. The author uses a practical approach that speaks to educators who want to enhance their practice through research.

Moreover, the author discusses different types of action research, such as first-person, second-person, and third-person, and framework so researchers can choose the one that aligns with their research questions. Furthermore, Ahmed integrates her explanation of action research with national and international teaching frameworks, such as the Initial Teacher Training and Early Career Framework (ITTECFT). This connection shows how action research can be integrated into professional development and practice improvement.

The book offers a holistic perspective to conducting effective action research. It thoroughly covers the research process, ranging from

writing tips to data collection methods and quality assurance. By including a complete research proposal and a project report in Chapters Six and Seven, Ahmed demonstrates to the readers how all the research elements come together in a real-world context. In addition, the author stresses the importance of reflective practice and developing research skills at the undergraduate level. Ahmed advocates for integrating research skills into STEM curricula to foster a research mindset and benefit future STEM professionals.

The book provides a roadmap for educators and novice researchers who wish to develop and implement action research to help them improve their practice. It includes practical applications such as a step-by-step guide to conducting action research projects and examples, templates, and links. Moreover, it highlights reflective practice for continuing professional learning. However, since it focuses on STEM education, it may limit its applicability to researchers in other fields.

All in all, *A 101 Action Research Guide for Beginners* (2024) is an essential additional source to the action research literature, mainly for those new to the field or working in STEM education because it provides a comprehensive examination of the research process while focusing on practical application as well as its accessibility. In other words, it demystifies the action research process and its terminology for novice researchers, especially those seeking to integrate research into their professional teaching practice and develop their research skills. This guide encourages educators, especially in the STEM disciplines and beginner researchers, to explore, learn, and apply the knowledge and skills provided in this book to enhance their practice through purposeful research.

References

Ahmed, S. (2024) *A 101 action research guide for beginners: Demystifying action research terminology using a concrete STEM action research project*. Oxford, UK, Peter Lang Ltd.