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Review of **Conducting Technology Acceptance Research in Education Theory: Models, Implementation, and Analysis**



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Technology is a powerful tool that can be seen in every aspect of our lives. One of the important aspects in which technology has made a significant impact is in the field of education, where it has transformed the way students learn and teachers instruct. As technology continues to advance, educators must stay informed and adapt their teaching methods to best utilize these tools for the benefit of their students. Hence, Ömer Faruk Ursavaş (2022) authored a book to help educators navigate the ever-changing landscape of technology in education and provide practical strategies for implementation.

The book *Conducting Technology Acceptance Research in Education Theory, Models, Implementation, and Analysis* is the outcome of the Ursavaş's extensive research and experience in the field of technology acceptance in education, providing a comprehensive guide for researchers and practitioners looking to conduct technology acceptance studies in educational settings. This book provides a comprehensive overview of technology acceptance models, providing researchers with a solid foundation for understanding and applying these theories in their studies. It serves as a useful manual for scholars, providing conceptual clarifications and practical illustrations to bridge the gap between theory and practice in educational research.

The handbook is divided into seven chapters covering various aspects of educational technology, from the history of technology in education to current trends and future possibilities. Each chapter provides practical examples and case studies to illustrate key concepts and help readers apply them in real-world settings.

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In the first chapter, “Technology Acceptance: A Myth or Necessity,” Ursavaş defines technology and discusses its significance in people’s lives. He looks at technology determinism, which is defined as the idea that technology shapes society on its own and controls most human activities. It is regarded as the most powerful force for change, energizing people and solving issues. There are two schools of thought on technological determinism: pessimists who worry about the negative consequences of contemporary information and communication technologies, and believe that in educational settings, technology will replace teachers, and optimists who see only good things coming from them (Kankaanrinta, 2000). Conversely, instrumentalists see technology as a means to an end, contending that social circumstances and individuals’ desires are the primary drivers of progress. The idea that technology is superior has been strengthened by the prevalent tech-centric viewpoint in educational technologies, including digital competency, coding, and artificial intelligence. Technological integration in education has become more complex due to social networking sites, smart devices, and cloud computing. Adoption is influenced by social and developmental elements, and effective methods include demonstrating technological dominance, using cutting-edge products, and understanding the social context. Policymakers have revised goals, such as digital literacy and online education, due to technological advancements. Concepts like digital literacy, ICT literacy, proficiency, competence, and computer literacy are essential. Technology acceptance research has real-world implications for improving efficiency, productivity, and quality of life. However, while this chapter provides a comprehensive overview of the various areas where technology acceptance has been studied, it is important to note that there may be other factors influencing human behavior towards technology that have not been explored in depth. For example, cultural differences and individual personality traits could also play a significant role in technology acceptance. Additionally, the rapid pace of technological advancements may require constant updates and revisions to the TAM model to remain relevant in today’s ever-changing digital landscape.

In chapter two “Theory of reasoned action (TRA),” and chapter three “Theory of planned behavior (TPB),” the author looks at factors (e.g., behavior, intention, attitudes, and subjective norms) that influence teachers’ use of technology in the classroom. He also explores how these factors interact and impact teachers’ decision-making processes when it comes to integrating technology into their teaching practices. Furthermore, he discusses real-life situations where behavior is not under the individual’s control, such as past experiences or the availability of resources. Ajzen’s Theory of Planned Behavior (TPB) (1985) is an extension of TRA, considering attitudes, norms, and intentions. TPB includes perceived behavioral control as a determinant of intention, with positive attitudes and subjective norms affecting the individual’s intention to perform a behavior. To control actual behavior, individuals need skills and resources, and their control level must be adequate. In some cases, the levels of perceived behavioral control and actual control may not be equal, but as an individual’s sense of control increases, their desire to perform the behavior will also increase. Yet, these two chapters may lack a more in-depth analysis of the impact of subjective norms on technology use, as well as a discussion on potential ways to address any negative effects of external pressures on technology adoption. Additionally, exploring the role of intrinsic motivation in technology use could provide a more comprehensive understanding of individuals’ attitudes and behaviors towards technology.

Information and communication technologies (ICT), which are covered in detail in Chapter four, are viewed as essential infrastructure for every economic sector. The chapter highlights the importance of studying technology acceptance to understand how individuals interact with ICT. By examining the components of Technology Acceptance Model (TAM) and external variables, researchers can gain valuable insights into user behavior and preferences. This chapter also focuses on technology compatibility which plays a significant role in influencing teachers’ use of technology and their perception of its benefits. As mentioned in this chapter, compatibility is important, it is not the sole factor that impacts teachers’ belief in how technology can enhance their job performance. Other

variables also play a role in shaping teachers' attitudes towards technology integration in education. This chapter might need a more thorough explanation of the difference between objective usability and perceptual usability, as well as examples to illustrate the concept.

The title of chapter five is "Motivational Model (MM)." In this chapter, the author delves into the different motivators that influence technology acceptance, including both extrinsic and intrinsic factors. By examining the role of hedonistic and utilitarian motivations in behavioral intention for use, the author aims to provide a comprehensive understanding of technology adoption. The chapter also explores how these motivators interact and influence individuals' decisions to adopt technology, shedding light on the complexities of user behavior. Through the Motivational Model (MM), the study aims to contribute valuable insights into the factors driving technology acceptance. However, in this chapter, the author could have delved deeper into the potential moderating effects of demographic variables on the relationship between motivations and behavioral intention. Additionally, exploring the implications of these findings for practitioners looking to design more user-friendly technology could have added practical value to the chapter.

"Unified Theory of Acceptance and Use of Technology Model (UTAUT)" is the title of chapter six, in which the author commences on talking about the importance of technology in daily life and education and mentioning that some still prefer traditional methods. In this chapter, the author uses the Technology Acceptance Model (TAM) to highlight a few studies on the factors influencing people's adoption and acceptance of new technologies. This chapter shows UTAUT is a model that explains 70% of technology use variance in behavioral intention and 50% of technology use variance. He also notes that UTAUT includes performance expectancy, effort expectancy, social influence, facilitating conditions, and individual reactions, and UTAUT2 has been expanded to include hedonic motivation, price value, and habit variables, and has been found to be regulated by age, gender, and experience. The author also discusses that the model is more descriptive and recommended for future studies, but researchers must determine factors and theoretical models for specific contexts. This chapter aids readers in comprehending the variables that can forecast and affect user behavior in a variety of settings. Nonetheless, it would be helpful to note that the UTAUT2 model may not be applicable in all situations, and researchers should consider adapting or combining it with other theories to better understand user behavior. Additionally, further explanation is needed in this chapter to explore the interactions between the variables and how they may vary across different cultural and demographic groups.

Finally, in chapter seven "Previously Completed Systematic Review and Meta-Analysis Studies," the author explains the importance of information and communication in technologies (ICT) and how they can impact the acceptance of technology in educational settings. Additionally, the author highlights the challenges faced by educators in integrating technology into their teaching practices and emphasizes the need for further research to address these challenges effectively by which educators can better navigate the complexities of incorporating ICT into their classrooms. Ultimately, the chapter underscores the significance of understanding and addressing factors influencing technology acceptance in educational contexts to enhance teaching and learning outcomes. However, it would be helpful if the author also discussed specific strategies or best practices that have been successful in overcoming these challenges, providing practical guidance for educators looking to incorporate technology effectively in their teaching. Furthermore, exploring the impact of technology integration on student engagement and academic achievement could provide valuable insights for educators seeking to maximize the benefits of technology in their classrooms.

In summary, this book, with its introduction of various models and case studies, serves as a valuable resource for educators looking to enhance their teaching practices using technology. It offers a

comprehensive guide on how to leverage digital tools to improve student outcomes and foster a more interactive and collaborative learning experience, and it equips readers with the knowledge and tools needed to effectively incorporate technology into their classrooms and engage students in meaningful learning experiences.

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