

Digitale Lernwelten: Serious Games und Gamification – Didaktik, Anwendungen und Erfahrungen in der beruflichen Bildung: A Book Review

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[Becker, Wolfgang & Metz, Maren (Hrsg.) (2022): *Digitale Lernwelten – Serious Games und Gamification : Didaktik, Anwendungen und Erfahrungen in der Beruflichen Bildung*. Springer VS Wiesbaden, ISBN 978-3-658-35058-1 (print) | ISBN 978-3-658-35059-8 (eBook) | DOI: 10.1007/978-3-658-35059-8]



Advancing digitalisation is changing the educational landscape, particularly in vocational education. Digital learning methods such as serious games and gamification offer new, creative ways of teaching specialised knowledge and practical skills. These innovative formats combine playful elements with pedagogical goals and have established themselves as extremely effective tools (Strahringer & Leyh, 2017). The German-language volume *Digitale Lernwelten – Serious Games und Gamification : Didaktik, Anwendungen und Erfahrungen in der beruflichen Bildung* (Becker & Metz, 2022) offers a comprehensive and well-structured overview of these methods and their potential for promoting learning processes and skills development. It combines well-founded theoretical concepts with practical examples and brings together the expertise of academics and practitioners on the opportunities and challenges of these learning methods.

The book is divided into five main parts. The first part deals with the theoretical concepts of digital learning, focussing on media-didactic and methodological aspects of serious games and gamification. The second part deals with the practical use and evaluation of these methods in education and

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provides practice-orientated examples. The third part goes into more depth and examines the use of serious games and gamification in the areas of production and human resources, using concrete case studies from the corporate world. The fourth part is dedicated to the application of serious games and gamification in the health and social sector, particularly in the areas of prevention and therapy. Finally, the fifth part takes a look at future development perspectives and the further development of these methods in vocational training. Each of these parts is divided into several chapters that deal with specific topics in detail, so that the book comprehensively covers both theoretical and practical perspectives.

A central aspect of the book is the presentation of serious games, which are seen as didactic tools in their own right, not just as a supplement to traditional teaching methods. Ingrid C. Jeske shows that serious games integrate learning seamlessly into the game and actively involve learners without making them feel that they have to learn specifically. Birgit Spies adds to this by emphasising the emotional and cognitive benefits of serious games, which promote the long-term retention of knowledge. Another important topic is gamification, the integration of game elements into educational processes in order to increase the engagement and motivation of learners. Oliver Korn, Anika Sabrina Schulz and Belinda Janine Hagley explain how elements such as rewards, leaderboards and challenges secure knowledge in the long term. Thorsten Kodalle and Maren Metz show that gamification strengthens not only cognitive but also social skills by creating a collaborative and motivating learning environment.

A comparison with other scientific studies shows that the challenges and effects of gamification in educational contexts are complex. The literature review by Dichev and Dicheva (2017) on the effectiveness of gamification shows both positive effects and the difficulties of practical implementation, especially with regard to adaptation to different learning contexts and integration into the curriculum. These findings are consistent with the concepts discussed in the book and show the need for careful planning and needs-based application of gamification elements. A meta-analysis by Kim and Castelli (2021) also confirms the positive effects of gamification, particularly in terms of learner motivation and behaviour change. The study shows that shorter gamified interventions tend to be more effective than longer ones, with the design and context of the elements used playing a central role. These findings support the argumentation in the book and emphasise the importance of targeted, context-sensitive use of gamification elements.

Although the book is well-founded and well-structured overall, there is still room for improvement. One important point of criticism is that there is a lack of practical instructions for the implementation of serious games and gamification. While the theoretical concepts are covered in detail, there is often a lack of concrete, realisable steps that would help educational institutions and companies to integrate these methods efficiently. Particularly when it comes to implementation in various educational contexts, whether at school, at university or in vocational training, further examples and practical recommendations for action could have significantly increased the practical benefits of the book. Firstly, the practical aspects of implementing serious games and gamification could be explored in greater depth. It would be helpful if the next edition of the book offered concrete instructions and examples for the implementation of these methods in various educational institutions and contexts. A stronger focus on practical steps would help users of the book to effectively put the concepts presented into practice.

Despite these suggestions for improvement, the book offers significant added value. It contributes to the existing literature by emphasising the positive effects of serious games and gamification on learning processes and providing a sound overview of the theory and practice of these methods. Of particular value is that the book combines both theoretical foundations and practical examples, making it a valuable resource for practitioners and academics alike.

In conclusion, the volume *Digital Learning Worlds - Serious Games and Gamification* (Becker & Metz, 2022) makes an important contribution to the discussion on modern learning methods and offers valuable impulses for the further development of vocational education and training. The book convinces with a sound theoretical basis and practice-orientated examples, but a stronger focus on concrete implementation possibilities and a deeper examination of the challenges of practical application could further increase the practical benefits. In particular, the topics of practical implementation and the barriers that need to be overcome in educational institutions should be given more space in order to strengthen the book as a valuable practical tool. Despite this potential for improvement, the scientific work of Dichev and Dicheva (2017) and Kim and Castelli (2021) confirms the positive effects of gamification on learning.

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