Preface

This publication is an attempt to capture the current trends in the use of virtual realities in teaching and learning. *Immersive Environments, Augmented Realities, and Virtual Worlds: Assessing Future Trends in Education* is divided into three sections: “Teaching and Learning,” “Social Learning,” and “Future Trends.” Each section focuses on the various constituent groups in education and the effects of technologically generated and supported realities in education.

Section one, “Teaching and Learning,” considers various strategies for developing learning environments in virtual worlds. Chapter one explores the creation of knowledge and student engagement and the positive effects of interactions in virtual worlds on learning outcomes. Chapter two examines multi-user virtual environments in the science classroom and the challenges of implementing these innovations. Chapter three describes the effects of using virtual environments to stimulate students’ interests in pursuing STEM careers. Chapter four provides some promising practices for mathematics instruction using visualization. Chapter five presents a practitioner’s perspective on the use of virtual reality in a classroom setting. The final chapter in this section, chapter six, examines how virtual worlds impact students through visual learning.

Section two, “Social Learning,” focuses on how virtual realities can impact social learning and the effects of social structures on virtual worlds and how these processes manifest themselves in technologically-generated environments. Chapter seven examines the differences in gaming skills acquisition between male and female students. Chapter eight examines new discourse patterns that emerge in virtual environments and considers the effects of these emerging modes of discourse on learners. Chapter nine examines the impacts virtual environments have on learner engagement and the changing roles that these virtual worlds can create among teachers and learners. Chapter ten provides insights into the differences between digital identities created through social media and face-to-face behaviors. Chapter eleven examines how immersive worlds can function as sandboxes to improve learners’ business competencies.

Section three, “Future Trends,” focuses on what comes next in the use of virtual worlds and simulations in teaching and learning. Chapter twelve considers the decline in popularity of virtual worlds and the implications for the future of virtual environments as educational tools. Chapter thirteen presents an argument for how virtual worlds can bring together intellectual resources globally with great immediacy for synchronous collaboration. Chapter fourteen reviews current instructional practices in virtual environments and proposes a research agenda to enhance learning in these spaces. Chapter fifteen, the final chapter, is an innovative and exciting examination of how leadership in virtual environments can provide insights into instructional leadership.
This book is intended to provide a way forward for current and future educators. It is impossible to predict what the future of technologically generated realities will be, but the work of the contributing authors presents ways forward that are exciting and creative. It is my hope that educators will find this book a valuable resource to guide their own development as teachers and learners.

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