

## International Journal Of Child Computer Interaction

Through this work the authors propose to contribute to the dissemination of global learning in terms of non-formal education, to promote the development of knowledge, skills and abilities for the transition to sustainable consumption patterns, thereby contributing to the complex education of the consumer, under the motto of sustainable development. The information presented in this publication complements the results obtained within the framework of the European project "Development education and awareness raising" (Sincerely Food) implemented by non-governmental organizations from Latvia, Bulgaria, Croatia, Estonia and Romania under the coordination of the Lithuanian Consumer Institute. The publication is structured on 7 chapters, comprising in addition introduction, and bibliography: Chapter I: Non-formal education. Theoretical concepts Chapter II. Lifelong education Chapter III. Non-formal education for sustainable development. Case study: Mobile tools in public spaces Chapter IV. Interactive digital education Chapter V. Simulation-based training Chapter VI. Digital storytelling Chapter VII. Guided debate

The education system is constantly growing and developing as more ways to teach and learn are implemented into the classroom. Recently, there has been a growing interest in teaching computational thinking with schools all over the world introducing it to the curriculum due to its ability to allow students to become proficient at problem solving using logic, an essential life skill. In order to provide the best education possible, it is imperative that computational thinking strategies, along with programming skills and the use of robotics in the classroom, be implemented in order for students to achieve maximum thought processing skills and computer

competencies. The Research Anthology on Computational Thinking, Programming, and Robotics in the Classroom is an all-encompassing reference book that discusses how computational thinking, programming, and robotics can be used in education as well as the benefits and difficulties of implementing these elements into the classroom. The book includes strategies for preparing educators to teach computational thinking in the classroom as well as design techniques for incorporating these practices into various levels of school curriculum and within a variety of subjects. Covering topics ranging from decomposition to robot learning, this book is ideal for educators, computer scientists, administrators, academicians, students, and anyone interested in learning more about how computational thinking, programming, and robotics can change the current education system.

Computers and mobile technologies have become widely adopted as sought-after tools in the field of education. The prevalence of technology in early childhood education (ECE) is increasing, and teachers, both pre-service and in-service, are using best practices to integrate tools effectively to improve teaching and learning within the field. This includes settings such as childcare centers, family childcare, and community programs that have both educators and administrators adapting to the use of technology. Therefore, it has become critical to research and explore the best practices of technology integration and successful strategies to improve the use of technology in ECE. The Handbook of Research on Empowering Early Childhood Educators With Technology examines best practices that focus specifically on those that facilitate the development of competencies in teaching young children (birth to age 8) and technology integration. The chapters include information on the foundations of technology in early childhood education, content-specific technology applications, developmentally

appropriate practices (DAP) for learners using technology, and how to meet diverse learner needs with technology. The target audience for this book is early childhood professionals, teacher educators, pre- and in-service teachers in early childhood settings, faculty and researchers in the field of education, instructional technologists, childcare and elementary school administrators, early education policy organizations, and advocacy groups that are interested in the best practices and successful strategies for implementing technology in ECE. Assistive Technology (AT) is the term used to describe products or technology-based services which support those with disabilities or other limitations to their daily activities, enabling them to enjoy a better quality of life. This book presents the proceedings of the 13th European Conference on the Advancement of Assistive Technology (AAATE 2015), held in Budapest, Hungary in September 2015. This biennial conference has established itself as a leading forum in the transdisciplinary area of Assistive Technology, providing a unique platform for the gathering of experts from around the world to review progress and challenges in the interdisciplinary fields which contribute to AT, such as research, development, manufacturing, supply, provision and policy. The theme of the 2015 conference is 'Attracting new areas and building bridges', and this book contains 138 reviewed papers and 28 poster presentations delivered at the conference, covering AT themes as diverse as aging, blindness, mobility, assisted living and accessibility for people with dementia and cognitive impairment. Offering a current overview of many aspects of AT, this book will be of interest to all those – from researchers and manufacturers to healthcare professionals and end-users – whose work or daily life involves the relationship between technology and disability. Teen Computer Interaction is concerned with the design, evaluation and implementation of

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technologies for teenagers and with the study of major phenomena surrounding them. It aims to give special consideration to the unique development issues and diversity of this particular user group. Teenagers are possibly the most diverse, dynamic and technologically-aware user group. Working with teenagers can enable researchers to gather valuable insights and opportunities to inform the design and implementation of new technologies. Researchers have now begun to acknowledge that Teen Computer Interaction is a specialised area of HCI and this book brings together some of the best work in this field to-date. The book provides relevant HCI communities with an inclusive account of methods and examples of best practice to inform those working with teenagers in research and design projects. The chapters recount research with teenagers in many different domains and provide many different contributions to the field of Teen Computer Interaction including design methods, models, case studies and ethical considerations. The aim of this book is to provide a solid foundation from which the discipline of Teen Computer Interaction can grow, by providing a valuable resource for those wishing to conduct HCI research with teenagers. Perspectives on HCI Research with Teenagers is aimed at academics, practitioners, designers, researchers and students who are interested in the new and emergent field of Teen Computer Interaction.

How might digital technology and notably smart technologies based on artificial intelligence (AI), learning analytics, robotics, and others transform education? This book explores such question. It focuses on how smart technologies currently change education in the classroom and the management of educational organisations and systems.

This book discusses the burgeoning world of young children's exposure to educational media and its myriad implications for research, theory, practice, and policy. Experts across academic

disciplines and the media fill knowledge gaps and address concerns regarding apps, eBooks, and other screen-based technologies—which are being used by younger and younger children—and content delivery and design. Current research shows the developmental nuances of the child as learner in home, school, and mobile contexts, and the changes as parenting and pedagogy accommodate the complexities of the new interactive world. The book also covers methods for evaluating the quality of new media and prosocial digital innovations such as video support for separated families and specialized apps for at-risk toddlers. Highlights of the coverage: The role of content and context on learning and development from mobile media. Learning from TV and touchscreens during early childhood Educational preschool programming. How producers craft engaging characters to drive content delivery. The parental media mediation context of young children's media use. Supporting children to find their own agency in learning. Media Exposure During Infancy and Early Childhood is an essential resource for researchers, clinicians and related professionals, and graduate students in diverse fields including infancy and early childhood development, child and school psychology, social work, pediatrics, and educational psychology.

This book brings together a collection of research-based papers on current issues in early childhood mathematics education that were presented in the Topic Study Group 1 (TSG 1) at the 13th International Congress on Mathematical Education (ICME-13), held at the University of Hamburg in 2016. It will help readers understand a range of key issues that early childhood mathematics educators encounter today. Research on early childhood mathematics education has grown in recent years, due in part to the well-documented, positive relation between children's early mathematical knowledge and their later mathematics learning, and to the

considerable emphasis many countries are now placing on preschool education. The book addresses a number of central questions, including: What is mathematical structural development and how can we promote it in early childhood? How can multimodality and embodiment contribute to early mathematics learning and to acquiring a better understanding of young children's mathematical development? How can children's informal mathematics-related experiences affect instruction and children's learning in different mathematics content areas? What is the role of tools, including technology and picture books, in supporting early mathematics learning? What are the challenges in early childhood mathematics education for teachers' education and professional development?

Present day sophisticated, adaptive, and autonomous (to a certain degree) robotic technology is a radically new stimulus for the cognitive system of the human learner from the earliest to the oldest age. It deserves extensive, thorough, and systematic research based on novel frameworks for analysis, modelling, synthesis, and implementation of CPSs for social applications. *Cyber-Physical Systems for Social Applications* is a critical scholarly book that examines the latest empirical findings for designing cyber-physical systems for social applications and aims at forwarding the symbolic human-robot perspective in areas that include education, social communication, entertainment, and artistic performance. Highlighting topics such as evolinguistics, human-robot interaction, and neuroinformatics, this book is ideally designed for social network developers, cognitive scientists, education science experts, evolutionary linguists, researchers, and academicians.

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This book includes a selection of the best research papers presented at the annual conference of the Italian chapter of the Association for Information Systems (AIS), which took place in Verona, Italy in October 2016. Tracing various aspects of the ongoing phenomenon of evolution towards a global society, and consequently the ever-innovating digital world, it first discusses emerging technologies and the new practices in the information-systems world. It then examines the new businesses and ongoing business transformations. Lastly, it considers the economic and societal changes brought about by access to and exploitation of socio-technical networks. The plurality of views offered makes the book particularly relevant for users, companies, scientists and governments.

Mobile technologies combined with an interdisciplinary approach to knowledge and

organization of learning experiences that are meaningful to children could create a creative and interactive learning environment different from that of traditional teaching. Making good use of mobile learning with appropriate devices will increase the learning motivations of the students and help them bring about positive performance. Mobile Learning Applications in Early Childhood Education is a collection of innovative research on the methods and applications of mobile learning techniques and strategies within diversified teaching settings. While highlighting topics including computational thinking, ubiquitous learning, and social development, this book is ideally designed for researchers, teachers, parents, curriculum developers, instructional designers, academicians, students, and practitioners seeking current research on the application of mobile technology within child education.

Teaching models that focus on blended and virtual learning have become important during the past year and have become integral for the continuance of learning. The i<sup>2</sup>Flex classroom model, a variation of blended learning, allows non-interactive teaching activities to take place without teachers' direct involvement, freeing up time for more meaningful teacher-student and student-student interactions. There is evidence that i<sup>2</sup>Flex leads to increased student engagement and motivation as well as better exploitation of teachers' and classroom time leading to the development of higher order cognitive skills as well as study skills for students' future needs related to citizenship, college, and careers. The Handbook of Research on K-12 Blended and Virtual Learning

Through the i<sup>2</sup>Flex Classroom Model focuses not only on how to design, deliver, and evaluate courses, but also on how to assess teacher performance in a blended i<sup>2</sup>Flex way at the K12 level. The book will discuss the implementation of the i<sup>2</sup>Flex (isquareFlex), a non-traditional learning methodology, which integrates internet-based delivery of content and instruction with faculty-guided, student-independent learning in combination with face-to-face classroom instruction aiming at developing higher order cognitive skills within a flexible learning design framework. While highlighting new methods for improving the classroom and learning experience in addition to preparing students for higher education and careers, this publication is an essential reference source for pre-service and in-service teachers, researchers, administrators, educational technology developers, and students interested in how the i<sup>2</sup>Flex model was implemented in classrooms and the effects of this learning model.

The four-volume set LNCS 11746–11749 constitutes the proceedings of the 17th IFIP TC 13 International Conference on Human-Computer Interaction, INTERACT 2019, held in Paphos, Cyprus, in September 2019. The total of 111 full papers presented together with 55 short papers and 48 other papers in these books was carefully reviewed and selected from 385 submissions. The contributions are organized in topical sections named: Part I: accessibility design principles; assistive technology for cognition and neurodevelopment disorders; assistive technology for mobility and rehabilitation; assistive technology for visually impaired; co-design and design methods;

crowdsourcing and collaborative work; cyber security and e-voting systems; design methods; design principles for safety/critical systems. Part II: e-commerce; education and HCI curriculum I; education and HCI curriculum II; eye-gaze interaction; games and gamification; human-robot interaction and 3D interaction; information visualization; information visualization and augmented reality; interaction design for culture and development I. Part III: interaction design for culture and development II; interaction design for culture and development III; interaction in public spaces; interaction techniques for writing and drawing; methods for user studies; mobile HCI; personalization and recommender systems; pointing, touch, gesture and speech-based interaction techniques; social networks and social media interaction. Part IV: user modelling and user studies; user experience; users' emotions, feelings and perception; virtual and augmented reality I; virtual and augmented reality II; wearable and tangible interaction; courses; demonstrations and installations; industry case studies; interactive posters; panels; workshops. The chapter 'Analyzing Accessibility Barriers Using Cost-Benefit Analysis to Design Reliable Navigation Services for Wheelchair Users' is open access under a CC BY 4.0 license.

A diverse group of scholars redefine constructionism—introduced by Seymour Papert in 1980—in light of new technologies and theories. Constructionism, first introduced by Seymour Papert in 1980, is a framework for learning to understand something by making an artifact for and with other people. A core goal of constructionists is to respect

learners as creators, to enable them to engage in making meaning for themselves through construction, and to do this by democratizing access to the world's most creative and powerful tools. In this volume, an international and diverse group of scholars examine, reconstruct, and evolve the constructionist paradigm in light of new technologies and theories. Taken together, their contributions show that constructionism has advanced in educational research and practice—and also that, in turn, researchers and practitioners can learn from constructionism how to foster learning in ways that respect learners' creativity and communities. The contributors examine how constructionist design can function within contexts ranging from school and home to virtual spaces; explore ways to support learners who have been under-resourced, overlooked, or oppressed; discuss learning by collaboration; and consider the implications of learning as a creative process of construction, exploring ways to support creative enterprises within the constraints of formal classrooms. Finally, leading visionaries imagine where constructionism, design, and research will go next

Contributors Konstantin Aal, Dor Abrahamson, Edith K. Ackermann, Michael Ahmadi, Emma Anderson, Edward Baafi, Stephanie Benson, Laura Benton, Matthew Berland, Marina Umaschi Bers, Paulo Blikstein, Bryan McKinley Jones Brayboy, Karen Brennan, Leah Buechley, Angela Calabrese Barton, Teresa Casort, David Cavallo, Kiera Chase, Alison Clark-Wilson, Sequoia L. Dance, Joshua A. Danish, Sayamindu Dasgupta, Michael Eisenberg, Noel Enyedy, Deborah A. Fields, Andrea Forte, Gayithri

Jayathirtha, Brian Gravel, Sara M. Grimes, Idit Harel, Erica R. Halverson, Nathan Holbert, Celia Hoyles, Raquel Jimenez, Yasmin B. Kafai, Ivan Kalas, Anna Keune, Susan Klimczak, Eric Klopfer, Maximilian Krüger, Chronis Kynigos, Tim Kubik, Breanne K. Litts, Benjamin Mako Hill, Amon Millner, Andrés Monroy-Hernández, Richard Noss, Seymour Papert, Kylie Peppler, Judy Perry, Mitchel Resnick, Rebecca Reynolds, Ricarose Roque, Piers Saunders, Kristin A. Searle, Kimberly M. Sheridan, Arnan Sipitakiat, R. Benjamin Shapiro, Gary S. Stager, Gunnar Stevens, Vanessa Svihla, Edna Tan, Orkan Telhan, Naomi Thompson, Nalin Tutiya-phuengprasert, Anne Weibert, Michelle Hoda Wilkerson, Volker Wulf, Uri Wilensky, Jianwei Zhang

Data is the base for information, information is needed to have knowledge, and knowledge is used to make decisions and manage 21st century businesses and organizations. Thus, it is imperative to remain up to date on the major breakthroughs within the technological arena in order to continually expand and enhance knowledge for the benefit of all institutions. Information Technology Trends for a Global and Interdisciplinary Research Community is a crucial reference source that covers novel and emerging research in the field of information science and technology, specifically focusing on underrepresented technologies and trends that influence and engage the knowledge society. While highlighting topics that include computational thinking, knowledge management, artificial intelligence, and visualization, this book is essential for academicians, researchers, and students with an interest in information

management.

This book will serve as a resource for students, researchers, and practitioners in the area of early childhood education. The 18 chapters are divided and organized into the major areas relevant to early childhood education: early childhood development, play, science, mathematics, technology, literacy, and exceptional learners. Each chapter contains an overview of background information pertinent to the chapter and a synopsis of research or a new research study. The information contained in this book provides a foundation for past and/or present research and suggests future research studies.

Computer simulation, a powerful technological tool and research-proven pedagogical technique, holds great potential to enhance and transform teaching and learning in education and is therefore a viable tool to engage students in deep learning and higher-order thinking. With the advancement of simulation technology (e.g., virtual reality, artificial intelligence, machine learning) and the expanded disciplines where computer simulation is being used (e.g., data science, cyber security), computer simulation is playing an increasingly significant role in leading the digital transformation in K-12 schools and higher education institutions, as well as training and professional development in corporations, government, and the military. Teaching, Learning, and Leading With Computer Simulations is an important compilation of research that examines the recent advancement of simulation technology and explores innovative ways to utilize advanced simulation programs for the enhancement of teaching and learning outcomes. Highlighting a range of topics such as pedagogy, immersive learning, and social sciences, this book is essential for educators, higher education institutions, deans, curriculum designers, school administrators, principals, IT specialists, academicians,

researchers, policymakers, and students.

Participatory Design is a field of research and design that actively engages stakeholders in the processes of design in order to better conceptualize and create tools, environments, and systems that serve those stakeholders. In *Participatory Design for Learning: Perspectives from Practice and Research*, contributors from across the fields of the learning sciences and design articulate an inclusive practice and begin the process of shaping guidelines for such collaborative involvement. Drawing from a wide range of examples and perspectives, this book explores how participatory design can contribute to the development, implementation, and sustainability of learning innovations. Written for scholars and students, *Participatory Design for Learning: Perspectives from Practice and Research* develops and draws attention to practices that are relevant to the facilitation of effective educational environments and learning technologies.

*Mobile Learning Applications in Early Childhood Education* | IGI Global

This book aims at guiding the educators from a variety of available technologies to support learning and teaching by discussing the learning benefits and the challenges that interactive technology imposes. This guidance is based on practical experiences gathered through developing and integrating them into varied educational settings. It compiles experiences gained with various interactive technologies, offering a comprehensive perspective on the use and potential value of interactive technologies to support learning and teaching. Taken together, the chapters provide a broader view that does not focus exclusively on the uses of technology in educational settings, but also on the impact and ability of technology to improve the learning and teaching processes. The book addresses the needs of researchers, educators

and other stakeholders in the area of education interested in learning how interactive technologies can be used to overcome key educational challenges.

This volume is the result of a 2016 research symposium sponsored by the Association for Educational Communications and Technology (AECT) focused on the growing theoretical areas of integrating story and narrative into educational design. Narrative, or storytelling, is often used as a means for understanding, conveying, and remembering the events of our lives. Our lives become a series of stories as we use narrative to structure our thinking; stories that teach, train, socialize, and create value. The contributions in this volume examine stories and narrative in instructional design and offer a diverse exploration of instructional design and learning environments. Among the topics discussed: The narrative imperative: creating a story telling culture in the classroom. Narrative qualities of design argumentation. Scenario-based workplace training as storytelling. Designing for adult learners' metacognitive development & narrative identity. Using activity theory in designing science inquiry games . Changing the narrative of school: toward a neurocognitive redefinition of learning. Educational Technology and Narrative is an invaluable resource offering application-ready ideas to students of instructional design, instructional design practitioners, and teachers seeking to utilize theories of story and narrative to the ways that they convey and express ideas of instructional design and educational technology.

This volume presents current research on the connections between the home and family environment on children's mathematics development. Focusing on infancy through first grade, it details the role of parents and other caregivers in promoting numeracy and the ways their active participation can prepare young children for learning about formal mathematics.

Research data answer key questions regarding the development of numeracy alongside cognitive and linguistic skills, early acquisition of specific math skills, and numeracy of children with atypical language skills. The book also provides practical recommendations for parents and other caregivers as well as implications for future research studies and curriculum design. Included in the coverage: Ways to optimize home numeracy environments. Individual differences in numerical abilities. Cross-cultural comparisons and ways to scaffold young children's mathematical skills. Mathematics and language in the home environment. Center-based and family-based child care. Games and home numeracy practice. Early Childhood Mathematics Skill Development in the Home Environment is an essential resource for researchers, graduate students, and professionals in infancy and early childhood development, child and school psychology, early childhood education, social work, mathematics education, and educational psychology.

Various technologies and applications such as cognitive computing, artificial intelligence, and learning analytics have received increased attention in recent years. The growing demand behind their adoption and exploitation in different application contexts has captured the attention of learning technology specialists, computer engineers, and business researchers who are attempting to decipher the phenomenon of personalized e-learning, its relation to already conducted research, and its implications for new research opportunities that effect innovations in teaching. Cognitive Computing in Technology-Enhanced Learning is a critical resource publication that aims to demonstrate state-of-the-art approaches of advanced data mining systems in e-learning, such as MOOCs and other innovative technologies, to improve learning analytics, as well as to show how new and advanced user interaction designs,

educational models, and adoptive strategies can expand sustainability in applied learning technologies. Highlighting a range of topics such as augmented reality, ethics, and online learning environments, this book is ideal for educators, instructional designers, higher education faculty, school administrators, academicians, researchers, and students. Over the last few years, increasing attention has been focused on the development of children's acquisition of 21st-century skills and digital competences. Consequently, many education scholars have argued that teaching technology to young children is vital in keeping up with 21st-century employment patterns. Technologies, such as those that involve robotics or coding apps, come at a time when the demand for computing jobs around the globe is at an all-time high while its supply is at an all-time low. There is no doubt that coding with robotics is a wonderful tool for learners of all ages as it provides a catalyst to introduce them to computational thinking, algorithmic thinking, and project management. Additionally, recent studies argue that the use of a developmentally appropriate robotics curriculum can help to change negative stereotypes and ideas children may initially have about technology and engineering. The Handbook of Research on Using Educational Robotics to Facilitate Student Learning is an edited book that advocates for a new approach to computational thinking and computing education with the use of educational

robotics and coding apps. The book argues that while learning about computing, young people should also have opportunities to create with computing, which have a direct impact on their lives and their communities. It develops two key dimensions for understanding and developing educational experiences that support students in engaging in computational action: (1) computational identity, which shows the importance of young people's development of scientific identity for future STEM growth; and (2) digital empowerment to instill the belief that they can put their computational identity into action in authentic and meaningful ways. Covering subthemes including student competency and assessment, programming education, and teacher and mentor development, this book is ideal for teachers, instructional designers, educational technology developers, school administrators, academicians, researchers, and students.

Understanding Tablets from Early Childhood to Adulthood offers an alternative to dominant and populist narratives that young people are intuitively able to successfully use tablet devices. Adopting a research-driven approach, the book contests the ideology that touch-technologies are easier to understand, and identifies the factors that contribute to communicative encounters between users and tablets. Communication theory and cognitive psychology concepts and methods are employed to offer an epistemological exploration of user-tablet

interaction with a focus on the use of these technologies in educational settings. Cyber-physical systems (CPS) can be defined as systems in which physical objects are represented in the digital world and integrated with computation, storage, and communication capabilities and are connected to each other in a network. The goal in the use of the CPS is integrating the dynamics of the physical processes with those of the software and networking, providing abstractions and modelling, design, and analysis techniques for the integrated whole. The notion of CPS is linked to concepts of robotics and sensor networks with intelligent systems proper of computational intelligence leading the pathway. Recent advances in science and engineering improve the link between computational and physical elements by means of intelligent systems, increasing the adaptability, autonomy, efficiency, functionality, reliability, safety, and usability of cyber-physical systems. The potential of cyber-physical systems will spread to several directions, including but not limited to intervention, precision manufacturing, operations in dangerous or inaccessible environments, coordination, efficiency, Maintenance 4.0, and augmentation of human capabilities. Design, Applications, and Maintenance of Cyber-Physical Systems gives insights about CPS as tools for integrating the dynamics of the physical processes with those of software and networking, providing abstractions and

modelling, design, and analysis techniques for their smart manufacturing interoperation. The book will have an impact upon the research on robotics, mechatronics, integrated intelligent multibody systems, Industry 4.0, production systems management and maintenance, decision support systems, and Maintenance 4.0. The chapters discuss not only the technologies involved in CPS but also insights into how they are used in various industries. This book is ideal for engineers, practitioners, researchers, academicians, and students who are interested in a deeper understanding of cyber-physical systems (CPS), their design, application, and maintenance, with a special focus on modern technologies in Industry 4.0 and Maintenance 4.0.

How making and sharing video games offer educational benefits for coding, collaboration, and creativity. Over the last decade, video games designed to teach academic content have multiplied. Students can learn about Newtonian physics from a game or prep for entry into the army. An emphasis on the instructionist approach to gaming, however, has overshadowed the constructionist approach, in which students learn by designing their own games themselves. In this book, Yasmin Kafai and Quinn Burke discuss the educational benefits of constructionist gaming—coding, collaboration, and creativity—and the move from “computational thinking” toward “computational participation.” Kafai

and Burke point to recent developments that support a shift to game making from game playing, including the game industry's acceptance, and even promotion, of “modding” and the growth of a DIY culture. Kafai and Burke show that student-designed games teach not only such technical skills as programming but also academic subjects. Making games also teaches collaboration, as students frequently work in teams to produce content and then share their games with in class or with others online. Yet Kafai and Burke don't advocate abandoning instructionist for constructionist approaches. Rather, they argue for a more comprehensive, inclusive idea of connected gaming in which both making and gaming play a part.

This edited book focuses on affordances and limitations of e-books for early language and literacy, features and design of e-books for early language and literacy, print versus e-books in early language and literacy development, and uses of and guidelines for how to use e-books in school and home literacy practices. Uniquely, this book includes critical reviews of diverse aspects of e-books (e.g., features) and e-book uses (e.g., independent reading) for early literacy as well as multiple examinations of e-books in home and school contexts using a variety of research methods and/or theoretical frames. The studies of children's engagement with diverse types of e-books in different social contexts

provide readers with a contemporary and comprehensive understanding of this topic. Research has demonstrated that ever-increasing numbers of children use digital devices as part of their daily routine. Yet, despite children's frequent use of e-books from an early age, there is a limited understanding regarding how those e-books are actually being used at home and school. As more e-books become available, it is important to examine the educational benefits and limitations of different types of e-books for children. So far, studies on the topic have presented inconsistent findings regarding potential benefits and limitations of e-books for early literacy activities (e.g., independent reading, shared reading). The studies in this book aim to fill such gaps in the literature.

Digital integration is the driving force of teaching and learning at all levels of education. As more non-traditional students seek credentialing, certification, and degrees, institutions continue to push the boundaries of innovative practices to meet the needs of diverse students. Programs and faculty have moved from merely using technology and learning management systems to unique and innovative ways to engage learners. The Handbook of Research on Innovative Digital Practices to Engage Learners is an essential scholarly publication that offers theoretical frameworks, delivery models, current guidelines, and digital design techniques for integrating technological advancements in education

contexts to enforce student engagement and positive student outcomes.

Featuring a wide range of topics such as gamification, wearable technologies, and distance education, this book is ideal for teachers, curriculum developers, instructional designers, principals, deans, administrators, researchers, academicians, education professionals, and students.

This book combines several perspectives on the steps the Finnish educational system has taken to provide students with the skills and competences needed for living in today's society and in the future. The ecosystem is used as a metaphor for the educational system. The Finnish system aims to achieve sustainable education by ensuring that the system is simultaneously interconnected and open to transformations. The book describes how a flexible curriculum system is succeeding without the pressures of high-stake testing. It also illustrates how the ongoing curriculum reform of the basic education is working. The book brings together knowledge gained in schools through the cooperation of researchers, teachers, school principals, the public sector, and private companies. The book presents case studies of technology integration aimed at crossing boundaries in formal and informal learning settings, locally and globally. The contributors address 21st-century needs and requirements through learner-driven knowledge creation, collaboration, networking, and digital literacies. It opens new scenarios

of how to apply digital storytelling and games connecting fun, motivation, and learning. The strong message is that, through collaboration and networking, we can create an educational ecosystem that supports different learners.

The usability and design in technological systems is imperative due to their abundance in numerous professional industries. Computer interfaces have seen significant advancement in their design and development as they have become an integral part of today's society. As humans continue to interact with technology on a regular basis, it is essential for professionals, professors, and students to keep pace with innovative research on interface design and the various applications interfaces have in professional fields. Interactivity and the Future of the Human-Computer Interface is a collection of innovative research on the development and application of interfaces in today's modern society and the generational implications for design of human and technology interaction. While highlighting topics including digital gaming, augmented reality, and e-learning, this book is ideally designed for educators, developers, web designers, researchers, technology specialists, scientists, and students seeking current research on modern advancements and applications in human-computer interaction.

How and Why to Read and Create Children's Digital Books outlines effective ways of using

digital books in early years and primary classrooms, and specifies the educational potential of using digital books and apps in physical spaces and virtual communities. With a particular focus on apps and personalised reading, Natalia Kucirkova combines theory and practice to argue that personalised reading is only truly personalised when it is created or co-created by reading communities. Divided into two parts, Part I suggests criteria to evaluate the educational quality of digital books and practical strategies for their use in the classroom. Specific attention is paid to the ways in which digital books can support individual children's strengths and difficulties, digital literacies, language and communication skills. Part II explores digital books created by children, their caregivers, teachers and librarians, and Kucirkova also offers insights into how smart toys, tangibles and augmented/virtual reality tools can enrich children's reading for pleasure. *How and Why to Read and Create Children's Digital Books* is of interest to an international readership ranging from trainee or established teachers to MA level students and researchers, as well as designers, librarians and publishers. All are inspired to approach children's reading on and with screens with an agentic perspective of creating and sharing. Praise for *How and Why to Read and Create Children's Digital Books* 'This is an exciting and innovative book – not least because it is freely available to read online but because its origins are in primary practice. The author is an accomplished storyteller, and whether you know, as yet, little about the value of digital literacy in the storymaking process, or you are an accomplished digital player, this book is full of evidence-informed ideas, explanations and inspiration.' Liz Chamberlain, Open University 'At a time when children's reading is increasingly on-screen, many teachers, parents and carers are seeking practical, straightforward guidance on how to support children's engagement with digital books. This

volume, written by the leading expert on personalised e-books, is packed with app reviews, suggestions and insights from recent international research, all underpinned by careful analysis of digital book features and recognition of reading as a social and cultural practice. Providing accessible guidance on finding, choosing, sharing and creating digital books, it will be welcomed by those excited by the possibilities of enthusing children about reading in the digital age.' Cathy Burnett, Professor of Literacy and Education, Sheffield Hallam University

This state-of-the-art book explores the implications of contemporary trends that are shaping the future of museum experiences. In four separate sections, it looks into how museums are developing dialogical relationships with their audiences, reaching out beyond their local communities to involve more diverse and broader audiences. It examines current practices in involving crowds, not as passive audiences but as active users, co-designers and co-creators; it looks critically and reflectively at the design implications raised by the application of novel technologies, and by museums becoming parts of connected museum systems and large institutional ecosystems. Overall, the book chapters deal with aspects such as sociality, creation and sharing as ways of enhancing dialogical engagement with museum collections. They address designing experiences – including participatory exhibits, crowd sourcing and crowd mining – that are meaningful and rewarding for all categories of audiences involved. Museum Experience Design reflects on different approaches to designing with novel technologies and discusses illustrative and diverse roles of technology, both in the design process as well as in the experiences designed through those processes. The trend of museums becoming embedded in ecosystems of organisations and people is dealt with in chapters that theoretically reflect on what it means to design for ecosystems, illustrated by



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The year 2020 brought an unprecedented worldwide health crisis through the COVID-19 pandemic that has been affecting all sectors, including education. There were questions surrounding the effectiveness of online trainings for teachers, online teaching practices, the motivation and engagement of students, and the quality of learning and education in these times. Action research emerged to address these concerns, being a systematic process of inquiry using reflection within a cyclical model of planning, acting, implementing, evaluating, and continuous reflection. This method of research is employed with the expertise and passion from educators to better enhance online practices and education while using authentic learning and experiences. Using collaboration, social advocacy, and action research, there is the opportunity to advance teaching for students, families, and communities without a physical context involved. The Handbook of Research on the Global Empowerment of Educators and Student Learning Through Action Research explores successful teaching and learning skills through the method of action research and intersects it with online learning in order to uncover best teaching practices in online platforms. This book showcases educational professionals' action research for solutions in advancing teaching and learning, the practical benefits of action research, recommendations for improving online teaching and learning, and a focus on professional growth as well as social justice advocacy. It highlights important topics including student learning, teacher collaboration, authentic learning, advocacy, and action research in both K-12 and higher education settings. This book is ideal for inservice and preservice teachers, administrators, teacher educators, practitioners, researchers, academicians, and

students interested in how action research is improving and advancing knowledge on the best teaching practices for online education.

The perfect guide for pre-service teacher education students, in both primary and secondary education, to help you use technology in your classroom to effectively support your students' learning.

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