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Constructivist Instructional Design (C-ID) - Jerry W. Willis 2009-07-01
This book is about emerging models of design that are just beginning to be used by ID types. They are based on constructivist and chaos (non-linear systems or "soft systems") theory. This book provides constructivist instructional design (C-ID) theorists with an opportunity to present an extended version of their design model. After an introductory chapter on the history of instructional design models, and a chapter on the guiding principles of C-ID, the creators of six different C-ID models introduce and explain their models. A final chapter compares the models, discusses the future of C-ID models, and discusses the ways constructivist designers and scholars can interact with, and work with, instructional technologists who use different paradigms.
Human Factors in Software Development and Design - Saeed, Saqib 2014-09-30
Computer programs and processes that take into account the goals and needs of the user meet with the greatest success, so it behooves software engineers to consider the human element inherent in every line of code they write. Human Factors in Software Development and Design brings together high quality research on the influence and impact of ordinary people on the software industry. With the goal of improving the quality and usability of computer technologies, this premier reference is intended for students and practitioners of software engineering as well as researchers, educators, and interested laymen.
Embracing Diversity in the Learning Sciences - Yasmin B. Kafai 2012-10-12
More than a decade has passed since the First International Conference of the Learning Sciences (ICLS) was held at Northwestern University in 1991. The conference has now become an established place for researchers to gather. The 2004 meeting is the first under the official sponsorship of the International Society of the Learning Sciences (ISLS). The theme of this conference is "Embracing Diversity in the Learning Sciences." As a field, the learning sciences have always drawn from a diverse set of disciplines to study learning in an array of settings. Psychology, cognitive science, anthropology, and artificial intelligence have all contributed to the development of methodologies to study learning in schools, museums, and organizations. As the field grows, however, it increasingly recognizes the challenges to studying and changing learning environments across levels in complex social systems. This demands attention to new kinds of diversity in who, what, and how we study; and to the issues raised to develop coherent accounts of how learning occurs. Ranging from schools to families, and across all levels of formal schooling from pre-school through higher education, this ideology can be supported in a multitude of social contexts. The papers in these conference proceedings respond to the call.
Designing Communities - Wolff-Michael Roth 2012-12-06
The study described in this book arose in the contextof a three-year collective effort to bring about change in science teaching at Mountain Elementary School. 1 This opportunity emerged after I contacted the school with the idea to help teachers implement student-centered science teaching. At the same time, the teachers collectively had come to realize that their science teaching was not as exciting to children as it could be. They had recognized their own teaching as textbook-based with little use of the "hands-on" approaches prescribed by the provincial curriculum. At this point, the teachers and I decided that a joint project would serve our mutual goals: they wanted assistance in changing from textbook-based approaches to student-centered activities; I wanted to collect data on learning in student-centered knowledge producing classroom communities. I brought to this school my new understandings about classroom communi ties from several earlier studies conducted in a private high school (e. g. , Roth & Bowen, 1995; Roth & Roychoudhury, 1992). I wanted to help teachers create science learning environments in which children took charge of their learning, where children learned from more competent others by participating with them in ongoing activities, and teachers were responsible for setting up and maintaining a classroom community rather than for dissem inating information. After I had completed the data collection for the present study, I watched a documentary about an elementary school in the small French village of Moussac (Envoye Special, TV5, September 14, 1994).
21st Century Skills Development Through Inquiry-Based Learning - Samuel Kai Wah Chu 2016-09-21
This book presents innovative instructional interventions designed to support inquiry project-based learning as an approach to equip students with 21st century skills. Instructional techniques include collaborative team-based teaching, social constructivist game design and game play, and productive uses of social media such as wikis and other online communication affordances. The book will be of interest to researchers seeking a summary of recent empirical studies in the inquiry project-based learning domain that employ new technologies as constructive media for student synthesis and creation. The book also bridges the gap between empirical works and a range of national- and international-level educational standards frameworks such as the P21, the OECD framework, AASL Standards for the 21st Century Learner, and the Common Core State Standards in the US. Of particular interest to education practitioners, the book offers detailed descriptions of inquiry project-based learning interventions that can be directly reproduced in today's schools. Further, the book provides research-driven guidelines for the evaluation of student inquiry project-based learning. Lastly, it offers education policymakers insight into establishing anchors and spaces for applying inquiry project-based learning opportunities for youth today in the context of existing and current education reform efforts. The aim of this book is to support education leaders', practitioners' and researchers' efforts in advancing inspiring and motivating student learning through transformative social constructivist inquiry-based knowledge-building with information technologies. We propose that preparing students with inquiry mindsets and dispositions can promote greater agency, critical thinking and resourcefulness, qualities needed for addressing the complex societal challenges they may face.

The Art & Science of Learning Design - Marcelo Maina 2015-07-21
We live in an era defined by a wealth of open and readily available information, and the accelerated evolution of social, mobile and creative technologies. The provision of knowledge, once a primary role of educators, is now devolved to an immense web of free and readily accessible sources. Consequently, educators need to redefine their role not just “from sage on the stage to guide on the side” but, as more and more voices insist, as “designers for learning”. The call for such a repositioning of educators is heard from leaders in the field of technology-enhanced learning (TEL) and resonates well with the growing culture of design-based research in Education. However, it is still struggling to find a foothold in educational practice. We contend that the root causes of this discrepancy are the lack of articulation of design practices and methods, along with a shortage of tools and representations to support such practices, a lack of a culture of teacher-as-designer among practitioners, and insufficient theoretical development. The Art and Science of Learning Design (ASLD) explores the frameworks, methods, and tools available for teachers, technologists and researchers interested in designing for learning Learning Design theories arising from findings of research are explored, drawing upon research and practitioner experiences. It then surveys current trends in the practices, methods, and methodologies of Learning Design. Highlighting the translation of theory into practice, this book showcases some of the latest tools that support the learning design process itself.
Systemic Change in Education - Charles M. Reigeluth 1994

ECGBL 2018 12th European Conference on Game-Based Learning - Dr Melanie Ciussi 2018-10-04

Reconceptualizing Libraries - Victor R. Lee 2018-08-15
Reconceptualizing Libraries brings together cases and models developed by experts in the information and learning sciences to identify the potential for libraries to adapt and transform in the wake of new technologies for connected learning and discovery. Chapter authors explore the ways that the increased interest in the design research methods, digital media emphases, and technological infrastructure of the learning sciences can foster new collaborations and formats for education within physical library spaces. Models and case studies from a variety of library contexts demonstrate how library professionals can act as change agents and design partners and how patrons can engage with these evolving experiences. This is a timely and innovative volume for understanding how physical libraries can incorporate and thrive as educational resources using new developments in technology and in the learning sciences.
Designing Instruction for the Traditional, Adult, and Distance Learner: A New Engine for Technology-Based Teaching - Tomei, Lawrence A. 2009-09-30
"This book explores how technology impacts the process of devising instructional plans for adult students"--Provided by publisher.
Interactive Learning Systems Evaluation - Thomas Charles Reeves 2003
Describes how to evaluate interactive learning systems, both in their initial development and later in regard to effectiveness and efficiency. These include web-based systems, computer-aided learning, etc.
Technology Enhanced Learning: Best Practices - Lytras, Miltiadis D. 2008-04-30
"This book goes beyond traditional discussion on technology enhanced learning provides research and insights on increasing the efficiency of learning for individuals and groups, facilitating the transfer and sharing of knowledge in organizations, and understanding of the learning process by exploring links among human learning, cognition, and technologies. "--Provided by publisher.
Points of Viewing Children's Thinking - Ricki Goldman-Segall 2014-04-08
This book is about learning and ethnography in the context of technologies. Simultaneously, it portrays young people's "thinking attitudes" in computer-based learning environments, and it describes how the practice of ethnography is changing in a digital world. The author likens this form of interaction to "the double helix," where learning and ethnography are intertwined to tell an emergent story about partnerships with technology. Two school computer cultures were videotaped for this study. Separated not only by geography -- one school is on the east coast of New England and the other on the west coast of British Columbia on Vancouver Island -- they are also separated in other ways: ethnic make-up and inner-city vs. rural settings to name only two. Yet these two schools are joined by a strong thread: a change in their respective cultures with the advent of intensive computer-use on the part of the students. Both school communities have watched their young people gain literacy and competence, and their tools have changed from pen to computer, video camera, multimedia and the Internet. Perhaps most striking is that the way they think of themselves as learners has also changed: they see themselves as an active participant, in the pilot's seat or director's chair, as they chart new connections between diverse and often unpredictable worlds of knowledge.
Theoretical Foundations of Learning Environments - David H. Jonassen 2014-04-08
Theoretical Foundations of Learning Environments describes the most contemporary psychological and pedagogical theories that are foundations for the conception and design of open-ended learning environments and new applications of educational technologies. In the past decade, the cognitive revolution of the 60s and 70s has been replaced or restructured by constructivism and its associated theories, including situated, sociocultural, ecological, everyday, and distributed conceptions of cognition. These theories represent a paradigm shift for educators and instructional designers, to a view of learning as necessarily more social, conversational, and constructive than traditional transmissive views of learning. Never in the history of education have so many different theories said the same things about the nature of learning and the means for supporting it. At the same time, although there is a remarkable amount of consonance among these theories, each also provides a distinct perspective on how learning and sense making occur. This book provides students, faculty, and instructional designers with a clear, concise introduction to these theories and their implications for the design of new learning environments for schools, universities, and corporations. It is well-suited as a required or supplementary text for courses in instructional design and theory, educational psychology, learning, theory, curriculum theory and design, and related areas.
Collaborative Curriculum Design for Sustainable Innovation and Teacher Learning - Jules Pieters 2019-09-19
This open access book provides insight into what it takes to actively involve teachers in the curriculum design process. It examines different aspects of teacher involvement in collaborative curriculum design, with specific attention to its implications for sustainable curriculum innovation and teacher learning. Divided into six sections, the book starts out by introducing the notion of collaborative curriculum design and discusses its historical and theoretical foundations. It describes various approaches commonly adopted to actively involve teachers in the (co-)design of curriculum materials. Sections two and three provide examples of what key phases in the curriculum design process - such as needs analysis, design and development, and implementation - look like across various collaborative curriculum design projects. Section four reports on the impact of collaborative curriculum design on student learning, teacher practices, teacher professional growth, and institutional change. Building on the research evidence about the outcomes of collaborative curriculum design, section five focuses on sustainability, scaling-up and curriculum leadership issues, which are key to the continuation and further evolution of curriculum innovations. Future perspectives are addressed in section six with emphasis on the infrastructure of a sustainable curriculum innovation.
Never Mind the Laptops - Bob Johnstone 2003-08-17
"What we all hope for our children's education is undiminished curiosity and creativeness, and solid practical preparation for adult work. Today, there's no doubt that easy access to computers is vital for students. Bob Johnstone has brilliantly and passionately told the story of the worldwide struggle to make today's equivalent of the pencil accessible to all students." -Victor K. McElheny, author of "Watson and DNA" If every kid had a laptop computer, what would difference would it make to their learning? And to their prospects? Today, these are questions that all parents, teachers, school administrators, and politicians must ask themselves. Bob Johnstone provides a definitive answer to the conundrum of computers in the classroom. His conclusion: we owe it to our kids to educate them in the medium of their time. In this book he tells the extraordinary story of the world's first laptop school. How daring educators at an independent girls' school in Melbourne, Australia, empowered their students by making laptops mandatory. And how they solved all the obstacles to laptop learning, including teacher training. Their example spread to thousands of other schools worldwide. Especially in America, where it inspired the largest educational

technology initiative in US history-the State of Maine issuing laptops to every seventh-grader in its public school system. This lively, intriguing, anecdote-rich account is based on hundreds of interviews. In it, you'll meet the visionary leaders, inspirational principals, heroic teachers, and their endlessly-surprising students who showed what computers in the classroom are really for.

Handbook of Research on Integrating Digital Technology With Literacy Pedagogies - Sullivan, Pamela M. 2019-11-22

The allure and marketplace power of digital technologies continues to hold sway over the field of education with billions spent annually on technology in the United States alone. Literacy instruction at all levels is influenced by these evolving and ever-changing tools. While this opens the door to innovations in literacy curricula, it also adds a pedagogical responsibility to operate within a well-developed conceptual framework to ensure instruction is complemented or augmented by technology and does not become secondary to it. The Handbook of Research on Integrating Digital Technology With Literacy Pedagogies is a comprehensive research publication that considers the integration of digital technologies in all levels of literacy instruction and prepares the reader for inevitable technological advancements and changes. Covering a wide range of topics such as augmented reality, literacy, and online games, this book is essential for educators, administrators, IT specialists, curriculum developers, instructional designers, teaching professionals, academicians, researchers, education stakeholders, and students.

Learning Science in Informal Environments - National Research Council 2009-06-27

Informal science is a burgeoning field that operates across a broad range of venues and envisages learning outcomes for individuals, schools, families, and society. The evidence base that describes informal science, its promise, and effects is informed by a range of disciplines and perspectives, including field-based research, visitor studies, and psychological and anthropological studies of learning. Learning Science in Informal Environments draws together disparate literatures, synthesizes the state of knowledge, and articulates a common framework for the next generation of research on learning science in informal environments across a life span. Contributors include recognized experts in a range of disciplines-research and evaluation, exhibit designers, program developers, and educators. They also have experience in a range of settings-museums, after-school programs, science and technology centers, media enterprises, aquariums, zoos, state parks, and botanical gardens. Learning Science in Informal Environments is an invaluable guide for program and exhibit designers, evaluators, staff of science-rich informal learning institutions and community-based organizations, scientists interested in educational outreach, federal science agency education staff, and K-12 science educators.

Virtuality and Virtualization - Kevin Crowston 2007-10-05

This book begins with consideration of possible frameworks for understanding virtuality and virtualization. It includes papers that consider ways of analyzing virtual work in terms of work processes. It examines group processes within virtual teams, focusing in particular on leadership and group identity, as well as the role of knowledge in virtual settings and other implications of the role of fiction in structuring virtuality.

Handbook of Research on Educational Design and Cloud Computing in Modern Classroom Settings - Koutsopoulos, K.C. 2017-12-30

In the digital age, the integration of technology has become a ubiquitous aspect of modern society. These advancements have significantly enhanced the field of education, allowing students to receive a better learning experience. The Handbook of Research on Educational Design and Cloud Computing in Modern Classroom Settings is a pivotal reference source for the latest research findings on the strategic role of cloud computing in education, teaching, and the learning process. Featuring extensive coverage on relevant areas such as personal learning environment, cloud-based learning, and educational models, this publication is an ideal resource for educators, professionals, school administrators, researchers, and practitioners in the field of education.

Merging the Instructional Design Process with Learner-Centered Theory - Charles M. Reigeluth 2020-10-20

Merging the Instructional Design Process with Learner-Centered Theory brings together the innovations of two previously divided processes — learning design strategies/theories and instructional systems development — into a new introductory textbook. Using a holistic rather than fragmented approach that includes top-level, mid-level, and lower-level design, this book provides guidance for major topics such as non-instructional interventions, just-in-time analysis, rapid-prototype approaches, and learner-centered, project-based, anytime-anywhere instruction. Informed by the authors' considerable experience and leadership throughout dramatic shifts in today's learning landscape, this book offers the next generation of instructional designers a fresh perspective that synthesizes and pushes beyond the basics of design and development.

Creating the Coding Generation in Primary Schools - Steve Humble 2017-09-14

Creating the Coding Generation in Primary Schools sets out the what, why and how of coding. Written by industry innovators and experts, it shows how you can bring the world of coding to your primary school practice. It is packed with a range of inspirational ideas for the cross-curricular teaching of coding, from demystifying algebra in maths, to teaching music, to designing digital storytelling, as well as an insight into the global movement of free coding clubs for young people such as CoderDojo and Girls Learning Code. Key topics explored include: what we mean by 'coding' understanding and teaching computational thinking building pupils' passion for and confidence with technologies artificial intelligence systems how gender impacts on coding STEM learning and Computer Science using Minecraft to improve pupil engagement fun projects using a Raspberry Pi. Designed to be read from cover to cover or dipped into for ideas and advice, Creating the Coding Generation in Primary Schools offers all teachers a deeper knowledge and understanding of coding that will help them support and inspire the coding generation. It is cool to code!

Encyclopedia of Microcomputers - Allen Kent 1996-05-23

Teaching Critical Thinking and Problem Solving to Truth-Functional Logic

Handbook of Psychology, Educational Psychology - Irving B. Weiner 2003-01-03

Includes established theories and cutting-edge developments. Presents the work of an international group of experts. Presents the nature, origin, implications, an future course of major unresolved issues in the area.

Connected Code - Yasmin B. Kafai 2016-09-02

Why every child needs to learn to code: the shift from "computational thinking" to computational participation. Coding, once considered an arcane craft practiced by solitary techies, is now recognized by educators and theorists as a crucial skill, even a new literacy, for all children. Programming is often promoted in K-12 schools as a way to encourage "computational thinking"—which has now become the umbrella term for understanding what computer science has to contribute to reasoning and communicating in an ever-increasingly digital world. In Connected Code, Yasmin Kafai and Quinn Burke argue that although computational thinking represents an excellent starting point, the broader conception of "computational participation" better captures the twenty-first-century reality. Computational participation moves beyond the individual to focus on wider social networks and a DIY culture of digital "making." Kafai and Burke describe contemporary examples of computational participation: students who code not for the sake of coding but to create games, stories, and animations to share; the emergence of youth programming communities; the practices and ethical challenges of remixing (rather than starting from scratch); and the move beyond stationary screens to programmable toys, tools, and textiles.

Critical, Transdisciplinary and Embodied Approaches in STEM Education - Pratim Sengupta 2019-12-16

Over the past decade, integrated STEM education research has emerged as an international concern, creating around it an imperative for technological and disciplinary innovation and a global resurgence of interest in teaching and learning to code at the K-16 levels. At the same time, issues of democratization, equity, power and access, including recent decolonizing efforts in public education, are also beginning to be acknowledged as legitimate issues in STEM education. Taking a reflexive approach to the intersection of these concerns, this book presents a collection of papers making new theoretical advances addressing two broad themes: Transdisciplinary Approaches in STEM Education and Bodies, Hegemony and Decolonization in STEM Education. Within each theme, praxis is of central concern including analyses of teaching and learning that re-imagines disciplinary boundaries and domains, the relationship between Art and STEM, and the design of learning technologies, spaces and environments. In addition to graduate research seminars at the Masters and PhD levels in Learning Sciences, Science Education, Educational Technology and STEM education, this book could also serve as a textbook for graduate and pre-service teacher

education courses.
Emerging Research, Practice, and Policy on Computational Thinking - Peter J. Rich 2017-04-24
This book reports on research and practice on computational thinking and the effect it is having on education worldwide, both inside and outside of formal schooling. With coding becoming a required skill in an increasing number of national curricula (e.g., the United Kingdom, Israel, Estonia, Finland), the ability to think computationally is quickly becoming a primary 21st century “basic” domain of knowledge. The authors of this book investigate how this skill can be taught and its resultant effects on learning throughout a student's education, from elementary school to adult learning.
STEM Education - Information Resources Management Association 2014-12-31
"This reference brings together an impressive array of research on the development of Science, Technology, Engineering, and Mathematics curricula at all educational levels"--Provided by publisher.
Interaction Design and Children - Juan Pablo Hourcade 2008
Interaction Design and Children surveys the research on children's cognitive and motor development, safety issues related to technologies and design methodologies and principles. It also provides an overview of current research trends in the field of interaction design and children and identifies challenges for future research.
Computer Science Education Research - Sally Fincher 2014-04-21
This book provides an overview of how to approach computer science education research from a pragmatic perspective. It represents the diversity of traditions and approaches inherent in this interdisciplinary area, while also providing a structure within which to make sense of that diversity. It provides multiple 'entry points'- to literature, to methods, to topics Part One, 'The Field and the Endeavor', frames the nature and conduct of research in computer science education. Part Two, 'Perspectives and Approaches', provides a number of grounded chapters on particular topics or themes, written by experts in each domain. These chapters cover the following topics: * design * novice misconceptions * programming environments for novices * algorithm visualisation * a schema theory view on learning to program * critical theory as a theoretical approach to computer science education research Juxtaposed and taken together, these chapters indicate just how varied the perspectives and research approaches can be. These chapters, too, act as entry points, with illustrations drawn from published work.
Handbook of Research on Serious Games for Educational Applications - Zheng, Robert 2016-08-01
Games have been part of the entertainment industry for decades. Once only considered viable for personal entertainment, virtual gaming media is now being explored as a useful tool for learning and student engagement. The Handbook of Research on Serious Games for Educational Applications presents a comprehensive examination of the implementation of gaming in classroom settings and the cognitive benefits this integration presents. Highlighting theoretical, psychological, instructional design, and teaching perspectives, this book is a pivotal reference source for researchers, educators, professionals, and academics interested in the innovative opportunities of game-based learning.
Learning Through Problem Solving - Cindy E. Hmelo 2014-02-24
The articles in this special issue represent the findings of researchers working in classroom settings to explore key issues in learning through problem solving. Although they vary in the domains being studied, the age of students, and the methods they employ, there are numerous common themes that can inform both theory and practice. The authors have grappled with the complex task of putting problem-based curricula into practice. They report here the difficulties they faced, the factors contributing to their successes, and the lessons they have learned.
Encyclopedia of Library and Information Science - Allen Kent 1997-09-16
The Biological Literature to An Uncertainty Principle for Information Seeking: A Qualitative Approach
Reconsidering Science Learning - Eileen Scanlon 2004
A survey of science learning provides information on such topics as the processes in which science is learned and the diversity in science learning.
Mathematics Education and Technology-Rethinking the Terrain - Celia Hoyles 2009-10-09
Mathematics Education and Technology-Rethinking the Terrain revisits the important 1985 ICMI Study on the influence of computers and informatics on mathematics and its teaching. The focus of this book, resulting from the seventeenth Study led by ICMI, is the use of digital technologies in mathematics teaching and learning in countries across the world. Specifically, it focuses on cultural diversity and how this diversity impinges on the use of digital technologies in mathematics teaching and learning. Within this focus, themes such as mathematics and mathematical practices; learning and assessing mathematics with and through digital technologies; teachers and teaching; design of learning environments and curricula; implementation of curricula and classroom practice; access, equity and socio-cultural issues; and connectivity and virtual networks for learning, serve to organize the study and bring it coherence. Providing a state-of-the-art view of the domain with regards to research, innovating practices and technological development, Mathematics Education and Technology-Rethinking the Terrain is of interest to researchers and all those interested in the role that digital technology plays in mathematics education.
Music Learning with Massive Open Online Courses (MOOCs) - L. Steels 2015-11-24
Massive Open Online Courses, known as MOOCs, have arisen as the logical consequence of marrying long-distance education with the web and social media. MOOCs were confidently predicted by advanced thinkers decades ago. They are undoubtedly here to stay, and provide a valuable resource for learners and teachers alike. This book focuses on music as a domain of knowledge, and has three objectives: to introduce the phenomenon of MOOCs; to present ongoing research into making MOOCs more effective and better adapted to the needs of teachers and learners; and finally to present the first steps towards 'social MOOCs’, which support the creation of learning communities in which interactions between learners go beyond correcting each other's assignments. Social MOOCs try to mimic settings for humanistic learning, such as workshops, small choirs, or groups participating in a Hackathon, in which students aided by somebody acting as a tutor learn by solving problems and helping each other. The papers in this book all discuss steps towards social MOOCs; their foundational pedagogy, platforms to create learning communities, methods for assessment and social feedback and concrete experiments. These papers are organized into five sections: background; the role of feedback; platforms for learning communities; experiences with social MOOCs; and looking backwards and looking forward. Technology is not a panacea for the enormous challenges facing today's educators and learners, but this book will be of interest to all those striving to find more effective and humane learning opportunities for a larger group of students.
Interdisciplinary Advancements in Gaming, Simulations and Virtual Environments: Emerging Trends - Ferdig, Richard E. 2012-01-31
Gaming has long been a means for humans to share knowledge, learn new concepts, and escape the constraints of reality. Interdisciplinary Advancements in Gaming, Simulations and Virtual Environments: Emerging Trends investigates the role of games and computer-mediated simulations in a variety of environments, including education, government, and business. Exploring psychological, social, and cultural implications of games and simulations, as well as policies related to their design and development, this reference aims to support the work of researchers in this growing field, as well as bridge the gap between theory and practice in the application of electronic games to everyday situations.
Human-Computer Interaction -- INTERACT 2013 - Paula Kotzé 2013-07-30
The four-volume set LNCS 8117-8120 constitutes the refereed proceedings of the 14th IFIP TC13 International Conference on Human-Computer Interaction, INTERACT 2013, held in Cape Town, South Africa, in September 2013. The 53 papers included in the third volume are organized in topical sections on mobile usage and techniques, mobile UX and privacy concerns, model-based user interface design, multimodal user interface design, multimodality, cross-platform studies, narratives in design, navigation aids, novel user interfaces, passwords: e-authentication, physical ergonomics, road safety, seniors and usability, social behaviour, collaboration and presence, social collaborative interaction, social media, and software development.
Research Anthology on Computational Thinking, Programming, and Robotics in the Classroom - Management Association, Information Resources 2021-07-16
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.

Robots for Kids - Allison Druin 2000

Within the sphere of children's learning and play, the concept of robot and the application of actual robots are undergoing a dramatic expansion. Here the term "robot" refers to a growing range of interactive devices-including toys, pets, assistants to the disabled, and overtly educational tools-which are being used in ways that are expected to have profound and beneficial effects on how our children develop and grow. Robots for Kids: Exploring New Technologies for Learning opens with contributions from leading designers and researchers, each offering a unique perspective into the challenge of developing robots specifically for children. The second part is devoted to the stories of educators who work with children using these devices, exploring new applications and mapping their impact. Throughout the book, essays by children are included that discuss their first-hand experiences and ideas about robots. This is an engaging, entertaining, and insightful book for a broad audience, including HCI, AI, and robotics researchers in business and academia, new media and consumer product developers, robotics hobbyists, toy designers, teachers, and education researchers. * contributions by leaders in the fields of human-computer interaction and robotics * product development stories told by leading designers and researchers in organizations such as Microsoft, MIT Media Lab, Disney, and Sony * product application stories told by educators who are making robots a central part of kids' learning experiences, both in and out of the classroom * essays by kids-some, users of robotic technology, and others, designers in their own right