

## Preface

Despite the constraints on public school funding in most states, schools continue to devote an increasing percentage of their annual budgets to technology resources (Oppenheimer, 2003). Various studies in educational technology (Boster, Meyer, Roberto, & Inge, 2002; Brom, Sisler, & Slavik, 2010; Kulik, 2003; Robyer, 2006) show that effective use and integration of educational technologies occurs when the application directly (a) supports the curriculum objectives being assessed; (b) provides opportunities for student collaboration and project/inquiry based learning; (c) adjusts for student ability and prior experience, and provides feedback to the student and teacher about student performance; (d) is integrated throughout the lesson; (e) provides opportunities for students to design and implement projects that extend the curriculum content being assessed; and (f) is used in environments where the organization leaderships supports technological innovation.

Teaching Millennial Generation of students has become a daunting task for today's educators (Considine, Horton, & Mooreman, 2009). The current populations of students are technology-savvy, consider traditional methods of teaching boring, and have short attention span (Horne, 2010). By having a better understanding of the Millennial Generation students and their unique characteristics, we can build on their prior knowledge bases and engage and motivate them to be successful in the classroom. The primary concern in technology use is for teachers to go beyond technical competence to provide students with pedagogical uses and critically analyze their effective use in various contexts (Bush, 2003). If used appropriately, technology tools provide great opportunities to enhance student learning (Keengwe, 2007).

Technology may challenge the entire approach to the classroom experience, the essence of teaching, and the purpose of a school, but as tools, it presents great opportunities to support student learning (Keengwe, Onchwari, & Wachira, 2008). Further, classrooms that authentically use technology should experience changes in teacher's roles, learner's styles, and the process of learning. Additionally, "it seems reasonable that teachers will be more likely to help their students learn with technology if the teachers can draw on their own experiences in learning with technology" (Grabe & Grabe, 2008, p. 4). Therefore, *Research Perspectives and Best Practices in Educational Technology Integration* offers best practices in the process of incorporating learning technologies into classroom instruction and is an essential resource for academicians, professionals, educational researchers in education and educational-related fields.

The book contains a total of 16 chapters. The first chapter describes six case studies that showcase integration of digital tools such as "social media, collaboratively written online documents, webinars, clickers, simulation games, and Web technologies" as well as provide "technical, epistemological, cognitive, and social design features and suggestions for other instructors who are considering applying these technologies to their own courses." Similarly, chapter 2 examines technology integration in teacher education programs and provides suggestions on "best ways to integrate educational technology into pre-service teacher education programs and in-service teacher professional development programs to enhance effectively teaching and learning in K-12 classrooms.

Chapter three contributors review three cases studies of emerging technologies: clickers Maple, and screencasting that were implemented on one campus to enhance student learning while chapter four examines “how the modeling by instructors of technology integration would affect the quality of the lessons that elementary teacher-education students designed and taught in their field placements.” Chapter five examines “research that characterizes the complexity of teaching and integrating visual arts in K-12 education” while chapter six explores “research that characterizes the complexity of teaching and integrating visual arts in K-12 education.”

Chapter seven examines the role of librarians in informatics to support classroom in corporation of technology especially given that school librarians have knowledge and experiences to “select and incorporate informational and technological resources and learning activities that are developmentally appropriate and relevant for students” and “know how to collaborate effectively with the rest of the school community in order to optimize curriculum development, instructional design and delivery.” Chapter eight reviews the issues and challenges in employing “emerging technologies in educational settings particularly in developing countries such as Saudi Arabia” while chapter nine contributors “utilized the discriminant function analysis using extreme student groups (top and bottom quartiles) defined by students’ internet technology scores to develop a model that best predicts group membership of the low and high internet technology levels among college students.”

Chapter ten provides an example of how to incorporate educational computer games into upper-level education courses” while chapter eleven presents “the history of the online music degree, including its seminal beginnings, the technology innovations that drove the process, the evolution of essential team buy-in, the skills acquired by faculty, and the processes developed for delivery” at “a small public university in North Dakota.” Chapter twelve examines the use of social media to enhance instruction in higher education while chapter thirteen examines a new course using Technological Pedagogical Content Knowledge (TPACK) model.

Chapter fourteen “looks at the delivery of professional development on technological pedagogical content knowledge (TPACK), designed to increase teachers’ abilities to integrate technology into ELA curriculum. “ while chapter fifteen “provides a course design example for teacher educators about how to give pre-service teachers experience integrating technology with their instructions.” Finally, chapter sixteen explores the driving factors for identity hiding in social media environments. The chapter contributors make a compelling argument that “Teachers, both at secondary and tertiary level, need to be aware of such students concerns, and must treat lightly when they expect their students to share such information in the name of learning processes.” Further, “Most students’ familiarity with social media enables them to navigate how much, when and to whom they want to expose their life, and teachers need to trust their students’ judgment in this matter.”

In summary, the critical role of educational technology tools in public schools imply the need for educators to review effective ways to integrate various technology tools into the teaching and learning process to maximize student learning. Therefore, the hope is that each of the scholarly works presented will help forward the agenda and discussion on the significance and the need to assess and review existing professional practices in order to enhance effective teaching and learning with technology. Overall, this book is an essential resource for school administrators, faculty, teachers, technology staff, directors of Teaching and Learning centers, and other educational stakeholders – using or interested in educational technology tools.

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