Foreword

Over thirty years have passed since many of us embarked on the journey to integrate technology into teaching and learning. Technology innovations and possible theoretical frameworks have taken us down many paths and at times this exploration of technology integration has been to the detriment of student learning and the field of educational technology.

Looking back, the early 1980’s brought us computer programming, the ‘turtle’ of logo and computers that could actually store programs for later use on 5.25 floppy disks. As an educator, I was ecstatic to have what the business world and scientists had long been using for my K-12 classroom. Firm was my belief that Seymour Papert was right—computers were instruments for learning and enhancing creativity—and now I had the disk to prove it.

I had visions of learners constructing knowledge and sharing it through the swapping of disks between learners. Programming could be used to help develop critical and logical thinking, one of my key goals in my 7th grade science classroom. Computer clubs appeared in schools and programming competitions abounded. Logo and Lego brought robotics within the reach of my learners. Learning the Logo language kept me on my toes as I tried to stay one step ahead of my learners. These were heady times, as everyday was a new innovation in technology equipment and software! Technology integration was but a glimmering hope as we teachers tried to obtain the desired equipment and – of course – those wonderful dot-matrix printers.

The 1990’s took me on a different path in the realm of technology integration as I returned to Ohio University to work on my doctoral degree and really think about how technology integration could influence/impact learners. The many Department of Education Challenge grants and Preparing Teachers to Use Technology grants provided a research playground for examining the integration of technology into teaching and learning. As with the ‘80s, the focus was on the technology and software but the infancy of the Internet was coming into play as we all learned how to build a webpage. I spent hours with learners examining the ways in which a web page might provide the most efficient level of teaching and learning. Connectivity was interesting but content distribution was the goal for so many of us involved in the use of technology at this time.

The 21st Century began an explosion as Web 2.0 applications and software truly allowed for connectivity around the world with a multitude of connections to classrooms and environments for learning. Gone was the overwhelming desire to build websites with tons of content: everyone was building content and placing it on Twitter, Facebook, Vine and other web-based applications. Integration was still a concern within our traditional education frameworks but connection and participatory engagement for learning began to drive integration into our classrooms through the use of smartphones, tablets, netbooks and more. Teachers began to see that those tiny little pieces of code born in 80’s were now the foundation...
for the ubiquitous integration of technology into teaching and learning. The wide variety of available technologies allows for a more personal engagement with learning that can actively challenge the learner. Customization of content delivered to one or many and the ability to connect to experts for advisement, discussion and collaboration is now the central focus of learning. And while not everyone has the desired access to these tools, as an educator, I have finally realized that the real technology integration problem is access to the Internet and those fantastic Web 2.0 applications and the leadership in our institutions to demand access.

We have in some ways come full circle from the use of the computer by an individual to program learning to collective learning by individuals on the Web. Beginning with computer programming as an individual activity in our classrooms to the use of Web 2.0 to connect our classrooms all as participants, each of educator seeks to find that ‘magic bullet’ to improve teaching practice and student achievement. This new book, Handbook of Research on Educational Technology Integration and Active Learning, provides a wide range of examples and research on how to actively engage both educators and learners to connect us all as we continue to examine the issues surrounding the integration of technology to improve teaching and learning.

I wish the readers of this handbook the same exciting journey that has led me down many paths and I challenge each reader to think about how we can use technology as a tool for learning and creativity. Engaged learning and creativity are foundationally the path to the ability to think critically and solve problems. Education is a noble profession and the integration of technology helps us to provide access to more content and research, more opportunities to learn, more collaboration, more participation in problem solving, and better teaching practice through the development of best practices in the use of technology. May you never lose the joy of learning – it can change the world.

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Teresa Franklin's educational technology pursuits of 37 years include an 18-year career as a middle school and high school teacher of biology, chemistry, mathematics, and computer science and a 20-year career as an instructional technology Professor in The Patton College of Education, Ohio University, USA. Dr. Franklin teaches instructional design, online course design, research and program evaluation. Her research focuses on the integration of technology through curriculum development for f2f and online learning, the development of virtual learning environments; mobile technologies; and training in the use of technology both nationally and internationally. Dr. Franklin is the co-author of a widely used science education textbook, Science for All Children 5th edition, numerous book chapters, journal articles, video development projects, and keynote and invited speaker to numerous conferences worldwide. As a Fulbright Senior Research Scholar, Dr. Franklin has examined teacher preparation and technology integration in Turkish Higher Education and Middle East.