

Book review of Integrating Pedagogy and Technology: Improving Teaching and Learning in Higher Education

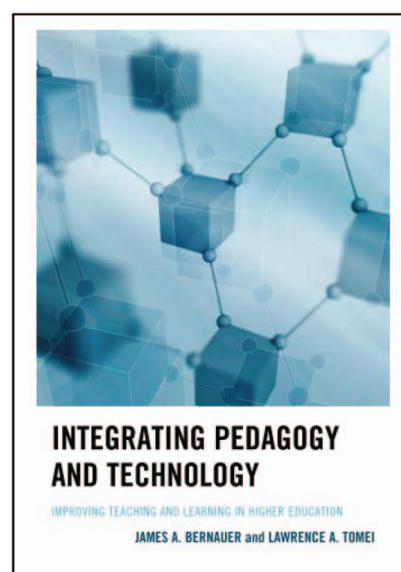
Integrating Pedagogy and Technology: Improving Teaching and Learning in Higher Education, James A. Bernauer & Lawrence A. Tomei, Maryland: Rowman & Littlefield, June 8, 2015, 1st Edition, 160 pages, ISBN-13: 978-1-4758-0928-2 (Paperback).

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Introduction

Technology applied in university courses must also include pedagogical rationale to be most effective. Likewise, faculty that are only using pedagogy and not including current technology are not fully preparing their students for careers beyond their undergraduate studies. Bernauer and Tomei aim to help college professors become master educators by fully utilizing both technology and pedagogy in unison. To that end, they have created a framework for faculty and an impressive list of tools with pre-identified objectives. The matrix introduced in this book has the potential to serve as an instructor evaluation in higher education.

The authors divided the book into four sections designed to guide both new and experienced professors through strategies of pedagogy and technology integration. The sections are (a) Foundations of Teaching and Learning in Higher Education, (b) Taxonomies of the Domains of Learning, (c) The Integrated Readiness Matrix, and (d) Putting it All Together and Capacity Building. The chapter format of the text follows solid lesson delivery construction with Advance Organizers, Content, Summary, Terms, Discussion Questions, References, and Suggested Readings.



Content

Part 1: Foundations of Teaching and Learning in Higher Education

The text begins by comparing high school teachers to college professors, including their background experiences prior to their teaching careers. The authors have contrasted the two in such a way by inferring that high school teachers have more preparation in pedagogical methods and thoughts, whereas the college professor is the content specialist.

To assist college professors in further understanding pedagogical background and research, the authors present an overview of five schools of educational psychology: Behaviorism, Cognitivism, Humanism, Constructivism, and Connectivism. Included in this portion of the text is a useful questionnaire to aid the reader in self-identifying with one of these five schools of thought. There is a summative table displayed at the end of this section that portrays a useful comparison of the characteristics of each school and their best practices.

Part 2: Taxonomies of the Domains of Learning

To assist professors in developing a framework for effective teaching, the authors have selected and summarized four taxonomies. The taxonomies included are Maslow's Hierarchy of Human Needs, Kohlberg's Stages of Development, Erikson's Theory of Human Development, and Marcia's Concept of Human Identity. Each taxonomy is presented and related to learning theories as it would apply in higher education.

Part 3: The Integrated Readiness Matrix

In a similar method to how employed professionals and their managers have utilized taxonomies in industry, college professors need a scale to measure the effectiveness of their course methodologies. Bernauer and Tomei selected two specific taxonomies for the measurement tools of their Integrated Readiness Matrix (IRM). Bloom's revised taxonomy serves as the cognitive domain and functions as the Y-axis of the IRM. The X-axis is Tomei's taxonomy for the technology domain. The authors argue that faculty are most effective when they are operating at the top of both taxonomies and have reached the "master integrator" quadrant of the matrix. To aid the reader in envisioning the use of the IRM, a sample professor identifies their current section of the IRM via the provided questionnaire.

In addition to pinpointing where a professor would fall on the IRM, there is also the expectation that the professor would develop strategies to advance further along the domains. This is perhaps the most beneficial aspect of this book as the authors have provided approximately 170 objectives for *each* pedagogical and technological domain level on the IRM. Each quadrant is broken down with learning objectives listed in application format directed at the college course. As a means for further discovery and collaboration, readers that have additional lesson ideas are invited to share those ideas with the authors for future publication.

Part 4: Putting it All Together and Capacity Building

The text concludes with a call to action for college faculty to further integrate technology into the pedagogical practices of their classes. While instructors at all levels should continually strive to become educators that are more efficient, universities have a responsibility to assist faculty in reaching that goal.

Conclusion

This book significantly contributes to the art of teaching with technology as it offers a practical list of resources that can increase the efficacy of university professors. I would recommend this book to those involved with instructional design, educational technology, or faculty development at the university level. Faculty would need to understand the teaching and learning of foundational content at the beginning of the book prior to self-identifying and advancing on the IRM scale. The reader would benefit further with the future inclusion of a blank IRM Questionnaire for self-reflection. However, the tools presented in the text could help individuals in faculty development roles while planning and designing program themes and resources. The book has the potential to function as a training guide for higher education teaching and learning centers.