

Integrating technology into higher education

(Book Review)

Reviewer:

Bao-Yu Hu

Ph.D. Candidate

Adult and Continuing Education

National Taiwan Normal University

Taiwan

lulu.hu@msa.hinet.net

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Integrating technology into higher education

M. O. Thirunarayanan and Aixa Perez-Prado (editors)

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The educational fields such research or teaching practices have been changed so rapidly while technologies are able to offer effective assistances. Integrating technology into instruction not only supports the implementation of high-quality instruction but also explores new issues in higher education. Despite different technologies have been used so widely in many fields, the main issue aims to how to make integrating models successful. Indeed, integrating technologies into higher education are based on two fundamental criteria. One is whether technology enhances learning or not; and the other one is that different integration models are required to explore for fitting pedagogical practices across diverse disciplines. Technology integration creates an alternative opportunity with high challenges that foster the pedagogical orientation from instructor-centered to learner-centered instruction.

“Integrating technology into higher education” is a collection of articles by different authors. It covers a comprehensive range of topics and consists of 20 chapters contributed by innovative application at higher educational settings. Those chapters cover 4 themes: infrastructure, instructional design, integration, and interaction. This book provides many new ideas and lessons learnt from their experiences to help instructors and administrators. The potential readers might be persons who eager to apply technology integration models or who concern about the problems and reflection regarding technology integration. It describes a comprehensive review on the state of art of technology at higher education levels. Most cases in this book gain positive feedbacks from both learners and instructors because technologies meet their needs, which are not so easy-to-get in traditional classroom-based and instructor-led instruction.

The book aims at the success and stumbling blocks faced and overcome while technology integration has been implemented at higher education levels. Issues regarding infrastructure, instructional design, integration, and interaction are interwoven in every chapter of this book. Firstly, infrastructure discusses what is in and outside instructors’ control while incorporating technology into the classroom, which also offers suggestions on how instructors can gauge infrastructure support at their institution. Secondly, instructional design demonstrates the construction of the course content, learning activities and assessment. Thirdly, integration presents the attributes of media and the presentation of teaching models. Fourthly, interaction deals with how technology supports asynchronous and synchronous interactions among instructors and students.

Whether technology enhances learning is related to the character and function of technologies. In this book, power point, excel and iMovie are used as visual aids to present well-organized discipline knowledge in one way. In the other way, they are used to help learners filter information and construct knowledge through hand-on activities. The interactive features of synchronous conference, MSN, and GIS are used to connect learners immediately. The role-play and virtual learning environment are used to simulate the real-life context. All the authors specify their concern in the selection of the technology to fit in with their instruction design, infrastructure conditions, and learners’ needs. The learning process is enriched when the instructors apply proper technologies in different functions to provoke learners’ interaction and collaboration with others.

In addition to the selection of technologies, different integration models are required in diverse disciplines. In this book, several integration models are demonstrated in a variety of disciplines, which lead us to view

integration models correlate with the discipline knowledge base. To elaborate rich context of psychology and counseling cases, CD-ROM and simulating environment are used in different levels to get learners immersed fully in educational situation. To present the abstract concept and spatial relations in earth science, GPS, Palm and digital tablets are used to help learners analyze qualitative and quantities data. Besides, to provide well-organized materials to the distributed or remote learners, email, forum, and teleconference are blended with classroom-based instruction. Due to the context-specific discipline knowledge and instructional situation, it is hard to get a fit-for-all model. Taking an example, Pamela L. Anderson-Mejias' "Online training for English as a second/foreign language teachers" and George Kafkoulis' "Project CineMath". In learning how to teach English, learners need more interaction and communication with peers than expert's answers. In contrast, learners need to self-discovery while learning the deductive ideas of math beyond instructor-led lecture. Technologies support asynchronous online course for learners to get instant feedback, and foster self-directed learning when they can review back and forth the reusable objects organized by subject and lecture. However, any model is based on firmly learning theory and special feature of disciplines, and there are some critical factors influencing integrating technology in higher education successfully. Those factors include instructional design, interaction, and infrastructure, which all center on learners' performance, cost efficiency, and teaching effectively.

As for the main concern, integrating technology in higher education is more than the presentation and delivery of teaching materials. The development and practice of leaning theory, where technology assists instructors to bring about more interaction and collaboration play a pivotal role. Instruction is a complicated system built in a real-life context while technology has been changing so fast that it is hard to provide any checklist to ensure the perfect model of teaching and learning. However, those cases in this book mirror the real situations among several universities and different countries. This book really contributes to the construction of technology integration model in terms of dimensions, strategies, and techniques, which can be adopted in other educational institutions. I would like to suggest the improvements on classification of the book in future editions. Appropriate articles could be categorized into 4 themes exactly. Then, it would help readers better understand which chapter they can grape at the first glance.