

## Book Review

# Student-Driven Learning Strategies for the 21st Century Classroom

Reviewed by Xiaodan Zhou, College of Computer and Information Engineering, Xiamen University of Technology, Xiamen, China

Reviewed by Chia-Wen Tsai, Department of Information Management, Ming Chuan University, Taipei, Taiwan

*Student-Driven Learning Strategies for the 21st Century Classroom* Hong-Mo Chan

© 2016 by IGI Global

434 pp.

\$205.00

ISBN 9781522516897

As the title implies, “Student-Driven Learning Strategies for the 21<sup>st</sup> Century Classroom” focuses on student-driven learning (SDL) strategies and technology-enhanced learning environments and tools (Garcia, Falkner, & Vivian, 2018; Myers, Hojjat, Miller, Bruer, & Ferrone, 2018). Watkins (2009) describes SDL using the metaphor “put the learners in driver’s seat”, which entails planning, monitoring and reflecting during learning process. With technology’s rapid iteration, the demand for talent is constantly changing (Kori, Pedaste, Leijen, & Mäeots, 2014), making co-learners out of both teachers and students in the 21st century. In order to cultivate students’ creativity and communication, problem-solving, and self-directed learning skills, students must be stimulated and encouraged throughout the learning process (Baeten, Kyndt, Struyven, & Dochy, 2010; Boelens, Wever, & Voet, 2017; Myers et al., 2018; Rahimi, van den Berg, & Veen, 2015). Targeting higher education administrators, educators, and related researchers, this book provides a collection of SDL concepts and practices from various countries and regions. The design of the book consists of 22 chapters which are grouped into three main sections: Parameters for the Design of SDL; Strategies and Approaches in SDL; and Supporting SDL.

The first section, entitled “Parameters for the Design of SDL,” is comprised of four chapters. Chapter 1 introduces the background and rationale that affect the development of SDL strategies. The article describes teachers and students as co-learners. Teachers learn how to promote meta-learning. Students sitting “in the driver’s seat” are responsible for their own learning and construct knowledge by interacting with their peers and the environment. In Chapter 2, Scott-Webber argues that the current classroom design that has been used for 5000 years hinders the development of active learning. He believes that density, flexibility, technology, and other student-centered factors should be considered in the design of next generation learning spaces. He argues that the learning

space provides behavior cues and impacts student engagement the most, and that an Evidence-Based Designed (EBD) classroom can offer metrics “proof” of student engagement. He provides a checklist for learning space needs to all stakeholders. Chapter 3 explores the effects of reflective learning on shaping teacher personalities. Reflection on learning not only promotes the growth of intellect, but also enhances professional identity. In the process of reflection, teachers reconstruct and define their roles based on social expectations and ideals and become teachers who are able to respond more diversely to professional needs. Chapter 4 focuses on teamwork capabilities based on STEM education. An effective student team can solve complex problems and innovate through learning, collaboration, communication, and creativity. However, not many studies exist for how to effectively improve the literacy and skills of student teams. Future research is directed toward how to develop psychological security among team members and how to effectively develop project-based or task-based teamwork skills in student and teacher teams.

The second section contains 14 chapters that focus on pedagogical approaches and strategies, technology use, and SDL tools. Chapter 5 investigates student time management strategies in blended learning, including planning, monitoring, and evaluation. The authors report that all these factors contribute significantly to time management, and that evaluation plays a major role in achieving effective time management. Chapter 6 provides a conceptual and practical overview of various innovative small group learning pedagogies in STEM classrooms including Problem-Based Learning (PBL), team-based learning, cooperative learning, and Collaborative Learning (CL), and online learning. After analyzing the benefits and difficulties of small group learning, Chapter 6 concludes that in both online and offline learning environments, the group cooperation learning method can effectively improve students’ performance and content retention as well as stimulate motivation and attitude. Chapter 7 discusses SDL tools within a technology-enhanced learning environment that includes PDAs, iPods, LMS, BYODs, and MOOCs. Because even the latest online learning tools continue to evolve over time, Sidhu, Kaur, and Choo suggest that teachers provide support and foster a CL environment to allow students to conduct collaborative online inquiry learning. Through collaborative inquiry and PBL, students become creative and self-directed lifelong learners, maintaining relevance and resilience in a changing global environment. Through exhaustive literature review and grounded theory, Chapter 8 reflects on the relationship between teaching and technology. As an SDL strategy, technology can enhance a student’s learning process or outcome, but there is no “one size fits all” model. It is a challenge for educators to consider all aspects of TPACK. Taylor’s University is a CL environment in Malaysia, and Chapter 9 reviews their implementation of the X\_Space Project to promote greater interactivity and participative learning. From student feedback, it can be concluded that the learning methods applied in the X\_Space project can improve learning efficiency and stimulate interest in learning. Chapter 10 introduces a case study of educational reform launched by Caribbean governments. After analyzing education mismatches in Caribbean classrooms, the authors describe the challenging transition from teacher-centered learning to student-centered learning pedagogies, including CL, active learning, and the infusion of technologies into physical and virtual learning spaces. To best enable learners, Chapter 11 continues by introducing a successful case study about the Peer Assisted Study Sessions (PASS) program on the Monash Malaysia campus, which enhances the learning experience by “helping students with difficult first year subjects.” The results reveal that the PASS program can contribute to student success in high-risk courses and help them build and maintain responsibility in learning.

Chapter 12 presents a new teaching method called service learning, which is rooted in experiential learning theory. The experimental study provides evidence that service learning can effectively eliminate students’ negative attitudes and perceptions toward persons with disabilities and promote an inclusive society in Malaysia. Chapter 13 critically questions the relationship between teaching and learning in traditional blended learning from a conceptual perspective. From a “carpe diem” perspective, Goodchild conducts a pedagogical redesign of blended learning. He emphasizes that a well-designed, purposeful blended learning approach should consider the learner experience around

learning spaces with the aim of enhancing engagement, SDL, and effective use of learning resources and time. Chapter 14 examines a new partnership between the doctor of business administration and the traditional doctoral degree program. The implementation of different forms of business doctoral education helps cultivate high-quality business science talents and output experts who can solve practical problems for the social business environment. Chapter 15 explores creative inquiry, which is an active learning strategy. Empirical research shows that contemplative reading helps cultivate creative inquiry for undergraduate economics students. Integrating oneself into the learning space helps adapt to the abnormal state of the 21st century context. Since student participation is influenced by the differences between national and target language cultures in foreign language learning, Chapter 16 proposes a t-MALL integrated model to motivate Malaysian student participation in the French classroom. The results reveal that student achievements in terms of engagement, coping strategies, and proficiency are encouraging. Chapter 17 presents the “Teens for Literacy” program in Savannah USA, which provides a literacy forum for middle school students to promote literacy among their peers and the community. The student-generated literacy initiatives include play vignettes, author visits, launching school newspapers, poetry initiatives, “Reading Buddy” partnerships, and shadowing days on the college campus. The results show that the students are motivated and almost all stakeholders expressed their excitement about the literacy program, including teachers, students, counselors, parents, and university administrators. In Chapter 18, undergraduate students of the UK adopt Corpora as a self-directed learning tool in English for Special Purpose (ESP) courses. Despite some students complain about the complexity of DIY corpora creation and compilation, most of the students have a positive attitude about it. Future studies should include designing more specific testing and taking learner characteristics such as degree level, language proficiency, and learning styles into consideration.

The third section consists of four chapters that aim to support SDL. Chapter 19 examines faculty conceptions of teaching and the possible relationship between conceptions of teaching and SDL pedagogies. Qualitative analysis of interviews divides teaching conceptions of into seven categories from A to F that correspond to three levels: knowledge oriented (lower-level conceptions), middle level, and competency oriented (higher-level conceptions). Because faculty conceptions of teaching have a profound impact on student learning in the short term, providing teachers with proper support and training is a good choice for most universities. However, in the long term, further improvements call for a cultural shift from teacher-driven to student-driven approaches. Chapter 20 proposes a cognitive apprenticeship method in law teaching. The authors compared several traditional methods of teaching law, including the lecture method, the Socratic method, and the case method. They found that traditional methods merely impart law knowledge to students without igniting the cognitive skills that a lawyer needs. In Chapter 21, Djoub encourages teachers to develop students’ reflection, collaboration, and creativity by integrating problem-solving, self-assessment, and peer assessment into the learning. It cannot be denied that the change in educational culture or shift in paradigm from teacher-centered classrooms to SDL requires institutional and policymaker support. Facing the global threat of graduate unemployment, the last chapter emphasizes a new skill for meeting 21st century trends in the labor market: the ability to forecast career trends. This skill composed of four sub-skills: perception of career desire; knowledge of specialization changes; recognition of career aspects; and invention of service methods.

In summary, this book collects a wide range of studies on SDL from concept to practice, and from multiple countries and regions. The book’s strengths are international and cross-cultural, providing various SDL strategies, approaches, educational technologies, physical and virtual learning spaces, tools, and interesting cases within different cultural contexts. In addition to redesigning and redefining classrooms, teacher roles, and faculty teaching conceptions, the representative SDL topics in this book include reflective learning, CL, the PASS program, service learning, creative inquiry, Teens for Literacy program, cognitive apprenticeship method, and skill of forecasting career trends, among others. Unfortunately, this book does not include enough articles on SDL support. It is recommended that the next edition include more articles on SDL support from various countries and regions (Biddix, Chung, & Park, 2015).

## REFERENCES

- Baeten, M., Kyndt, E., Struyven, K., & Dochy, F. (2010). Using student-centred learning environments to stimulate deep approaches to learning: Factors encouraging or discouraging their effectiveness. *Educational Research Review*, 5(3), 243–260. doi:10.1016/j.edurev.2010.06.001
- Biddix, J. P., Chung, C. J., & Park, H. W. (2015). The hybrid shift: Evidencing a student-driven restructuring of the college classroom. *Computers & Education*, 80, 162–175. doi:10.1016/j.compedu.2014.08.016
- Boelens, R., de Wever, B., & Voet, M. (2017). Four key challenges to the design of blended learning: A systematic literature review. *Educational Research Review*, 22, 1–18. doi:10.1016/j.edurev.2017.06.001
- Garcia, R., Falkner, K., & Vivian, R. (2018). Systematic literature review: Self-Regulated Learning strategies using e-learning tools for Computer Science. *Computers & Education*, 123, 150–163. doi:10.1016/j.compedu.2018.05.006
- Kori, K., Pedaste, M., Leijen, Ä., & Mäeots, M. (2014). Supporting reflection in technology-enhanced learning. *Educational Research Review*, 11, 45–55. doi:10.1016/j.edurev.2013.11.003
- Myers, S., Hojjat, S., Miller, R., Bruer, S., & Ferrone, M. (2018). Development of a student-driven information technology support service. *Currents in Pharmacy Teaching and Learning*, 10(10), 1391–1405. doi:10.1016/j.cptl.2018.07.008 PMID:30527369
- Rahimi, E., van den Berg, J., & Veen, W. (2015). Facilitating student-driven constructing of learning environments using Web 2.0 personal learning environments. *Computers & Education*, 81, 235–246. doi:10.1016/j.compedu.2014.10.012
- Watkins, C. (2009). Learners in the driving seat. *School Leadership Today*, 1(2), 28–31.

Xiaodan Zhou is a teacher in the College of Computer and Information Engineering, Xiamen University of Technology. Dr. Zhou's research interests include collaborative learning, computer-supported collaborative learning, flipped classroom, blended learning, activity theory and cognitive load theory. Readers can contact her by email: 83974941@qq.com.

Chia-Wen Tsai is a Professor in the Department of Information Management, Ming Chuan University. Dr. Tsai is one of the Editors-in-Chief of *International Journal of Online Pedagogy and Course Design*, and *International Journal of Technology and Human Interaction*. He is also the Associate Editor of *Cyberpsychology, Behavior, and Social Networking*. He is interested in online teaching methods and knowledge management.