
Editorial

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Biographical notes: Qiyun Wang is an Associate Professor in the Academic Group of Learning Science and Technologies at National Institute of Education, Nanyang Technological University, Singapore. His research interests include social media for teaching and learning, online learning, Web 2.0 tools, web-based learning environment design, and interactive learning.

In the new information age, technology has been tremendously used in almost every field of the society. Unexceptionally, technology also plays an increasingly important role in teaching and learning. Many technological tools and educational resources are online available nowadays or can be easily created. They undoubtedly have great potential to support and manage the teaching and learning process.

This special issue includes eight papers which reports on the use of various technologies to support teaching and learning. In the first paper written by Sun and Qiu, online wiki tools were used to support undergraduate students to learning English writing. In the experimental group, students completed their writing assignments in a collaborative way on the wiki platform out of class. In the control group, however, the students finished their assignments alone without any collaboration among them, and the teacher's comments on their work were only given after they submitted their exercise books. The findings showed that the students in the experimental group outperformed the students in the control group in the post-test. Interviews also showed that students had positive views towards the use of wikis.

In the second paper written by Néték, Dobesova, and Vavra, an online portal was developed by using cloud computing technology to support Botany education. This platform can be accessed both online and offline on the desktop computers or mobile devices. It provides a handful of taxonomical characteristics with spatial localisation in a field. When a student receives descriptive information about a plant, its localisation over the map can be displayed automatically. By using the platform, students will be able to increase botanical knowledge because they can use the application in the field. They can also improve their practical technical skills after working with the modern geographic information system.

In the following paper, Xie describes the design of a mobile learning system for higher vocational school students. This system combines autonomous learning and collaborative learning together, and provides rich learning contents. Students can choose any content they want to learn, and share experiences with one another. Teachers can also provide help to students by using the system. As the students in vocational students are

usually weak in second language learning, by using such a system, students have the possibility to increase their learning outcomes as they can learn English at anytime and anywhere. The results from a pilot study are also presented in the paper.

Jiao and Hao designed another online system for students to study the course of computer networks. As there are many abstract concepts in the course, students often have difficulties in understanding the concepts. This online system can demonstrate intuitively and interactively abstract and key concepts. This paper describes the design of the system and uses an example to illustrate how the system works.

In the next paper, Jing, Chen and Li describe another online system to promote students' autonomous English language learning. This paper describes the key components of the system and the implementation of a pilot study. The result of the pilot study shows that by following the autonomous learning approach supported by the online system, the students in the experimental group improved their abilities in English language skills to a larger extent than the students in the control group.

Physical education usually involves extensive skill training. Some skills might be hard to master. In the paper written by Zhang, Wen and Hu, a web-based visual multimedia presentation platform was created to support students when they were taking the public sports course. By using the system, students can observe techniques easily and conveniently. They can also watch still pictures or videos in the slow motion mode. The teacher can also take time to explain various decomposition actions in detail. After using the system for one year, they found that students in the experimental group improved their skills more obviously; their physical quality remained at a high level; and they were more actively involved in extra-curricular activities and competitions.

In the paper written by Jiang and Guan, a computer-assisted language learning programme was used to support students' oral interaction. This study investigated the correlation between learning tasks presented in the computer programme and students' interaction modes. They found that there was no one-one correlation between the task types and the interaction modes, but the task types did affect the quality of interaction. Also, the students had positive attitude towards the use of the computer programme to support their oral interaction.

In the last paper written by Sun, she applied Moodle-based Blended Learning to College English teaching and conducted an experimental study of 90 non-English majors within a semester to explore the effectiveness of Moodle-based blended learning. She found that the Moodle-based blended learning approach could greatly improve the language learners' enthusiasm and initiative, effectively promote the learners' English comprehensive competence and strengthen their cooperative learning and team spirit.

In summary, this special issue includes scholarly papers that describe research studies using different technological tools. Three papers report the use of existing tools (wiki, online videos, Moodle), while five papers report the design of new platforms to support teaching and learning. Also, this special issue includes cases of using technology to support various subjects. Five papers are about English language learning, one about computer networks, one about Botany education, and one about physical education. By reading through the papers, hopefully readers can get an overall picture of using various technological tools to support the teaching and learning processes in various subject domains.