21st Century Educational Challenges in EFL: Learners' Creativity and Innovation

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ABSTRACT

Today's fast-changing world demands that people, wherever they live, be equipped with 21st century skills. In the EFL context, appropriate support is needed to achieve meaningful learning outcomes. The qualitative study described below investigated 21st century educational challenges in EFL regarding students' creativity, innovation and self-efficacy via project-based learning. One hundred and two undergraduate students at a university in Thailand participated in the study as part of a course in English for tourist guides. Data were obtained from students' group projects and logs as well as presentation observations and focus group interviews. The findings illustrate the students' creativity, innovations and self-efficacy In addition, the teachers' roles were found to be crucial to fostering students' success. Findings also show that the types of projects and available online information played significant roles in the students' success. Finally, the study provides evidence that all students viewed online information as an important source of knowledge with adequate and feasible access despite the fact that they were not familiar with this new learning context. The present paper ends with a discussion of future interventions in EFL classrooms.

Keywords: 21st century education, creativity, innovation, self-efficacy

INTRODUCTION

Rapid changes in the global economy, technology and the instantaneous availability of vast amounts of information require new skill sets in many jobs. Current work contexts require strategies of technology know-how and inter-collaboration. Consequently, workplaces demand that people be equipped with 21st century skills including technology and collaborative skills which are crucial for future employment needs. This situation is a demanding challenge for the global population and societies including those in Asian countries. Technology growth influences people's lives with new ways of working, new tools for working, new ways of living, and even new ways of thinking, which in turn, change education (Griffin & Care, 2015). Thus, education and educational strategies must provide the knowledge and skills needed in the 21st century. Such education needs to build the skills required to solve complex problems never seen before by equipping learners with the ability to synthesize material from a wide variety of sources. In addition, education needs to provide learners opportunities to work with others in collaborative and productive ways (OECD 2011). The results of PISA assessments, which involve rigorous international surveys to assess the knowledge and skills of students in the participating countries, influence international practices. According to a recent PISA report on the achievements of many countries against a common set of benchmarks, Thailand ranked far behind neighboring countries, 50th out of 65 in 2012 (OECD, 2014). Thai students are still far from achieving academic excellence, with scores far below average despite the fact that its GDP per capita is

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higher than that of Vietnam, which outperformed it.

PISA analysis shows that motivated teaching, the quality of teaching methods, the participation of students and additional helpful tutorials may play a significant role in improving quality (UNESCO, 2011). Thailand's neighbors, Singapore and Vietnam, have adopted the "Teach less and learn more" approach, unlike Thailand, where students spend many more hours in class. Moreover, advocates of 21st century skills have found that student-centered methods, such as problem-based and project-based learning that can be currently easily accessed and acknowledged, are effective and practical. However, most Thai teachers still use ineffective, traditional practices. Recent research reveals that most class time in Thailand is teacher-centered with an emphasis on paperwork (Rotherham & Willingham, 2009). Despite the fact that knowledge and practices of the pedagogy of creativity and innovative teaching method can be easily accessed, the current classroom practices do not emphasize creativity or innovation (Cropley,2001). Shapson, Wright, Eason, & Fitzgerald (1980) confirm that teachers do not apply student-centered methods even with small class sizes.

This case study explored the ways in which creativity, innovative thinking and students' self-efficacy can be nurtured in the EFL context with Thai students.

METHODOLOGY

Participants

Three sections of EFL Thai students, totaling one-hundred and two, participated in the study as a part of a course in English for tourist guides. The three groups were regular students, weekend students and evening students. For the study they were assigned to groups of four.

Projects

The main group projects were the presentation of a cooking demonstration and the creation of a tourism website. In the first project students were asked to demonstrate how to prepare their favorite food, record their demonstrations and upload them on to Facebook. The project was open-ended, and students were free to select their preferred dishes to cook. Some websites and video clip models together with related information were provided and shared as samples on Facebook. Students were told to search for more such websites that would be informative and useful for their work. They were asked to feel free to share online knowledge or clips they found helpful with friends on Facebook. The second project, creating a website for their companies, involved procedure slightly different from the first project. The teacher pointed out the advantages and disadvantages of the sample websites and suggested that the students create websites that cater to the tourism trends that they had searched and presented in previous classes. She also discussed and shared ideas with each group after they had finished their plans for the projects. Finally, the students uploaded their websites onto Facebook and presented them in front of the class. Each group's presentation was recorded for observation. Also, the students recorded their performances for self-assessment and feedback.

At the very first class, the students were told about the current situation of the necessity of 21st century skills and Thailand's low ranking of compared to neighboring countries in the PISA assessment. The course goals and expected outcomes were also presented and discussed. In previous classes, students had studied, searched and presented information about tourism trends and tourist guides with their job responsibilities as part of the course.

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Research instruments

Data were obtained from the recordings of the students' group projects, their logs, presentation observations and semi-structured focus group interviews.

Data analysis

This qualitative study investigated 21st century educational challenges in EFL regarding students' creativity, innovation and self-efficacy via project-based learning. All data were qualitatively analyzed using Hyper Research Computer Program. The creativity and innovation for this study were operationally defined by Piirto (2011).

FINDINGS

The study found that teacher' roles, the types of project and available online information and models played significant roles in enhancing students' creativity, innovation and self-efficacy. Moreover, the study provides evidence that all students viewed online information as a primary source of knowledge with adequate and feasible access even though they were not familiar with the new learning context.

The students' creativity and innovation

The result of students' creativity and innovation analysis using the students' projects and logs and semi-structured focus group interviews are listed below. Nine derived descriptive content domains based on the key selected creativity and innovation indicators can be put into the categories of students' creativity and innovation indicators (Piirto,2011) selected for this study, as shown in Table 1 below.

Table 1: Selected creativity and innovation indicators and descriptive content domain

Selected creativity and innovation indicators and descriptive content domains

Creative thinking	**Working creatively with others**	**Implementation of innovation**
A wide range of idea creation techniques **1**. Group meetings with shared ideas and responsibility	**Developing, implementing and communicating new ideas to others effectively** **4.** Developing and communicating new ideas to others successfully	**Creative ideas to make a tangible and useful contribution to the field in which the innovation will occur** **8.** The opportunity for future application
Creation of new and worthwhile ideas **2.** Products from group members' ideas	**Incorporating group input and feedback into the work** **5.** Incorporating other group members' and outsource inputs	
Elaboration, refining, analysis and evaluation of ideas to improve and maximize creative efforts **3.** Creatively collaborative effort	**Demonstration of originality and inventiveness in work** **9.** Unique products	
Demonstration of imagination and curiosity **6.** Excitement over websites and online information access	**Viewing failure as an opportunity to learn and to be patient for the success** **7.** Failure and patience as opportunities to learn	

Piirto (2011).

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The results of the content analysis of the students' raw creativity and innovation descriptions based on the derived descriptive content domains are as follows.

Group meetings with shared ideas and responsibility

Most of the students' logs indicated that they called for a group meeting right after being assigned a particular task. They added that they brainstormed and agreed on the themes and topics and then planned how to complete the project. They agreed that they would share responsibilities in searching for the information online. A few additional meetings were called from time to time while many informal discussions were done online among students in the group for the final decision.

Products from group members' ideas

All students said that the websites they created emerged from the ideas of the group members based on the tourism trends, local knowledge and available natural resources in the area. They further stated that each of them was free to create his or her own part. Then they put everything on the table for a discussion and made a final draft with new ideas for their products.

Creatively collaborative effort

Students' logs suggest that all agreed that the website took most of their time. They mentioned that they spent almost a month finishing the websites. Each posted his or her part online and asked the rest of the group for their comments, including the advantages and disadvantages of the parts. They revised their website more than ten times by group and three times more than that individually. Some groups even asked outsiders to criticize and comment on their work.

Developing and communicating new ideas to others successfully

Most of the students said that they searched for information and models online and developed their ideas by combining materials they found while searching. They sent messages to members of the group who were from different provinces. They said that sometimes they found that they needed to find alternative ways to communicate to the group about the meaning of their work.

Incorporating other group members and outsource input

All of the students agreed that they saw their peers' ideas as unique and useful for the work. They mentioned that they were always asking the other groups and outsiders to comment on their work and often got some useful tips and information from them. They were happy to incorporate those comments in their work. They also understood that the diversity of ideas obtained from members of the group made their website unique.

Excitement with websites and information online access

Many students said that they accessed as many as websites and as much information online as they could to see what was there and how interesting it all was. They added that they usually thought of creating their websites in more attractive and unique ways.

Failure and patience as an opportunity to learn

From students' logs, it was found that the assigned work was not at all easy. The students were not familiar with group work or technological devices. They pointed out that it was difficult, and they sometimes disagreed with the other group members. They checked their work many times and needed to deal with improving their use of English. They all agreed

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that that was the most demanding experience they had ever had and understood that it took time to make progress.

The opportunity for future application

Most of the students' logs illustrated that their websites could be active and helpful when implemented in their locality for future opportunities. However, they said that their websites may need to be adjusted regarding some pictures of places and local resources which were in real time. Moreover, their local sites, which were famous for tourists, needed websites for tourism business purposes, as they had none available and their products could be the blueprints for their local community projects in the future.

Unique products

All students' websites demonstrated inventiveness. The content of these websites could not be found on any other available commercial websites. Tour itineraries were unique and originated from the group members' ideas and contributions. Students used their diverse local knowledge and ideas in the work. Some designs were indigenous and unique to their locals. Many of the websites they created were specific to certain places and had traditional local designs. Most students indicated that their works were their copyright.

Students' self-efficacy emerged from their logs, focus group semi-structured interviews and presentation observations.

The analysis shows that the students gained self-efficacy. The analysis of students' logs, presentation observations and semi-structured focus group interviews reveals that they thought it was not possible for them to finish the assigned tasks and projects. They felt that the projects were beyond their ability and they were not familiar with task-based and project-based learning. They did not think they would be able to handle the projects, and they did not want to try them. Also, they felt that their English was very poor and that they could not present their work in English. The students reported that they felt a little more comfortable with the first and second tasks, which were the presentation of knowledge that they had researched. However, they gained self-confidence in a more open project, the cooking demonstration where they looked happy. All members of the group delivered fun tasks with more confidence. They acted as if they were doing a variety cooking show on a television channel. The students said in their logs that the cooking task was demanding but fun. Many said that when facing some problems, they did not give up. Instead, they even stayed up late to finish the task. They could make their plan work well at last. The cooking demonstration models on YouTube were helpful and accompanied their work.

The last project, creation of a website, shows that most of the students gained more self-confidence compared to the cooking demonstration. The students reported that creating a website was very complicated and the most difficult task they had ever had to do. They made use of online discussions nearly all the time. They put all of their effort to get the job done. Many said that no one in the group knew how to create a website, but they saw that it was challenging and they felt that they would be able to create the finest and most website ever. Fencl and Scheel (2005) have found that the use of technological devices with collaborative learning increases learners' self-efficacy. The website project made the producers (students) proud of their products. They saw that the homemade website could be used in their local tourism business where previously there had been none and that it catered to tourism trends. Importantly, the website they created was the very first product with the combination of ideas, language and knowledge they reached only through their efforts. All students said that their websites were the first they had ever created, and they were of value. Their presentations showed that they acted as if they were the owners of the companies presenting

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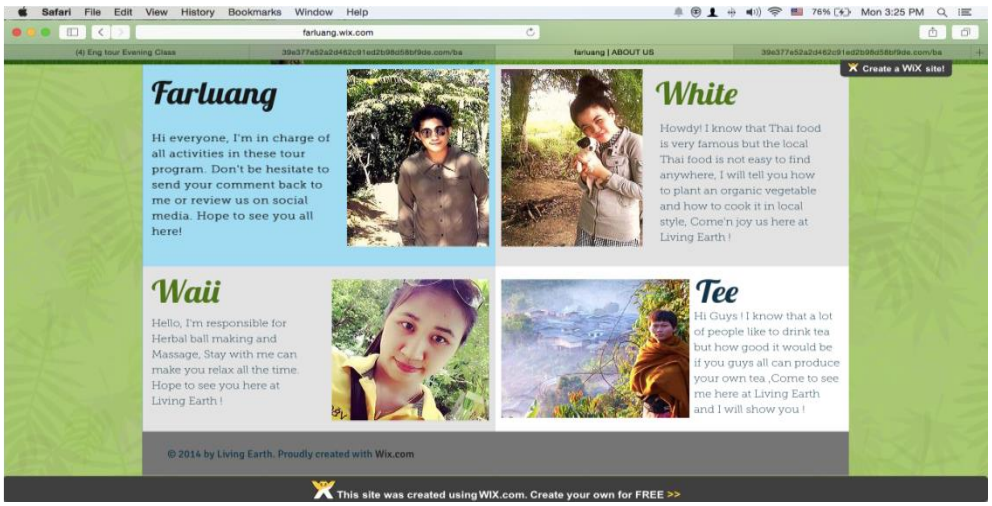
their unique websites. Some students mentioned that the website project was very helpful for them as they were seeking to create some similar websites for the companies they worked for at that time. Learners' successful experience is the important to enhancing self-efficacy (Banda,1981).

Figures 1 and 2 below show that the presenters walked to the screen and presented their products with confidence. They looked happy and were proud of themselves working as a group. Figure 3 illustrates that the students were proud to identify themselves as the contacts (About us) on the website.

Figure 1.

Figure 2

Figure 3.



Teachers' roles were found to be crucial in fostering students' success.

The application of teaching methodology that helps enhance learners' 21st century skills in EFL learning contexts requires proper systematic planning and effort from an optimistic teacher. These qualifications are necessary to replace the passive learning context, where English has been perceived as a bitter pill to swallow. In the present study, the teacher as a researcher designed the syllabus, lessons and activities in the form of a pyramid, The previous lesson would be the base, and it prepared students with knowledge and skills that facilitated their learning during the next one. The analysis from students' logs and semi-structured interviews indicated that the previous learning activities were helpful for their new learning tasks. As Banda (1981) points out, learners' successful experiences enhance self-efficacy. The selected contents of the lesson were those that were relevant and useful for a the work of a tourist guide. Lent and Hackett (1987) confirm that focusing on learners' interests

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and context correlates with learners' self-efficacy. The teaching method applied was an effective project-based learning unit that is believed to enhance learners' 21st century skills. During the first class period, the teacher applied a strategy that effectively eliminated learners' traditional perceptions of passive learning as a standard. She described the Thai educational crisis supported by dominant research evidence and examples and asked for a discussion. The teacher needed to believe in each learner's learning capacity and intelligence. The teacher applied friend-to-friend positive feedback in small cooperative groups after their work presentations. The teacher used the strategy of real-time, around-the-clock consultation by Facebook, Messenger, Line, and email for students so that they could easily contact her. Moreover, the teacher facilitated students' inquiries by supplying samples of linked online source and materials in real-time support. According to Bottino (2003) and Baek (2008), a teacher plays a crucial role in accelerating learners' creativity and innovation in education. He or she incorporates technical support, extra time and supporting material and integrates technologies into the teaching. The evidence coincides with Banda's idea (1981) that teachers can boost learners' self-efficacy by positive and convincing communication and feedback to get them through and motivate them to try their best. Moreover, creating a positive and relaxing learning environment can foster learners' belief in their capacity. Further evidence supporting this issue may lie in the findings of Woolfolk Hoy (2003) who found that a teacher's encouragement of students and acting as a peer model can improve self-efficacy for those who are struggling. Moreover, OECD (2010) notes that positive teacher-student relations with friendly support can help foster learning. Table 2 illustrates the supporting roles of a teacher.

Table 2. Teachers' roles that facilitate students' success

Teachers' roles that facilitate students' success
1. Apply well-planned lessons that support each other with meaningful content
2. Apply online and easily accessible channels of communication
3. Apply real-time consultation both on and offline
4. Respect learners' ideas and creativities
5. Apply friend-to-friend discussion strategies
6. Provide positive feedback
7. Provide materials and resources when asked
8. Be optimistic and flexible
9. Act as a facilitator and apply the "teach less and learn more" strategy
10. Apply the "knowledge management" strategy
11. Believe in equality and multiple intelligences

Types of project played significant roles in enhancing students' creativity, innovations, and self-efficacy.

The results of the study revealed that the more the project was open, the more creativity and

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innovation the students gained. In this study, students participated in two main projects, which were a cooking demonstration and creating a website of their own. Obviously, creating a website with a tour itinerary is more open and provides learners more opportunity to create their products than the cooking demonstration. The latter requires the students to search for the fixed content and language of the dish they preferred that can be found on YouTube and websites. By contrast, creating a website requires more cognitive load, creativity and effort to complete. Furthermore, creating a website requires the input of components from various sources. Students needed to find relevant, attractive pictures and content specific to their local information. The website also had many components that needed to be to completed. Moreover, the project produced concrete products.

Regarding the enhancement of students' self-efficacy, creating a website project made the producers (students) proud of their products. Margolis and McCabe (2006) point out that if learners have the opportunity to make choices, their decisions foster self-efficacy.

Online information and models played significant roles in enhancing students' creativity, innovations, and self-efficacy.

Analysis of students' logs and interviews indicates that online information and models played significant roles in enhancing students' creativity and innovations. At first the students did not have any idea of how to finish the assigned tasks because they had never been trained to do so in their past learning. The situation improved when the teacher provided suggested models from the linked websites. Right after the teacher's model presentation and suggestions, the students accessed more online sources and saw language and samples that they could learn from. They pointed out that after having been exposed to numerous related online sources; they had more information and ideas to share in group meetings. Moreover, the exposure activated their imaginations while they were searching online and even more during their discussion. They agreed that without the online information, models and samples, they would not have been able to create the valuable products that contained each member's ideas and contributions. They claimed that unlimited models opened their world and stimulated ideas, and that their projects would be much better and efficient than those currently available. Moreover, they added that their peers' products, posted on Facebook, provided them with more ideas, encouraged them to be persistent and inspired them to finish their jobs. Margolis and McCabe (2006) confirm that with peer models, struggling learners can learn by watching their classmates' success. Moreover, Rogers (1983) points out that technology fosters creative learning. Learners often use technology tools to learn in new, creative ways. Rogers' study coincides with that of Hargreaves (2004), who states that people can learn by technologies and social networking. Hargreaves added that people increasingly share knowledge and resources. The technology users display their creativity and innovations and receive feedback online. They also increasingly create networking and collaboration in cyberspace.

The study also provides evidence that all students viewed online information as an important source of knowledge with adequate and feasible access despite the fact that they were not familiar with this new learning context.

The study results reveal that unlimited information and models from Google search engine and YouTube corresponding to the assigned topic, students' styles and preferences were the major sources for the students. They made use of online information from websites and YouTube for their projects. They viewed the Internet as a friendly source of everything people want to know. It was easy to access at their convenience, and it was free of charge. They said that they felt much more comfortable using it and found many things to support

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their work. They pointed out that it was as if they could shop for free materials anywhere to complete the project. The analysis of student's logs and interview reveal the students' language noticing from those resources.

DISCUSSION

1. The result of this study shows that the most demanding tasks enhanced students' creativity, innovation and self-efficacy. These results differ with Margolis and McCabe (2006), who contend that a too difficult task will foster a low level of self-efficacy in learners. In the present case, it is likely that students' success resulted from the support they received from the information online by which they became aware of future trends in tourism. Also, they were aware of the significance of tourism websites that can be helpful with their future business and jobs, which in turn stimulated their motivation to complete the tasks. Moreover, the task types, accessible information and models, together with a helpful teacher, facilitated students' success.

2. Despite having been informed of the course goals together with the expected outcomes and exposed to online information and models, the students kept asking the teacher to check if they were doing the right things, particularly at the very beginning of the task process. This behavior was most likely explained by the fact that they were accustomed to traditional teaching and learning practices. Moreover, students who found the free website templates did not share them on Facebook until the teacher invited them to upload them for their classmates. The students mentioned in the interview that they were not sure if it was appropriate to do so. The situation suggests that the students found themselves between old and new ways of learning, and were getting new experiences with the teacher's support.

3. The result of the study indicates that the project that provided students more opportunity to play with their own ideas and resulted in a concrete product fostered the students' learning achievement. However, the analysis of the interviews and logs reveal that this type of project was very demanding and time consuming for them. The students stated that they would not have finished their websites if the teacher had not provided real-time consultation and inspired them to play with their ideas. The situation suggests that in similar contexts, the teacher should be the key person for the students' success. He/she should be available online, for students to access when they need help.

CONCLUSION

Because of worldwide job polarization, the influence of the flow of technology and the new skill demands in the workplace, countries must equip their populations with 21st century skills. Education is considered the primary tool with which to complete the mission. Accordingly, most countries, especially those who have joined PISA, have been monitoring their educational systems and teaching practices to equip their citizens with 21st century skills for the challenges ahead. While Asian countries performed well in PISA 2012, Thailand still had average scores and was far behind its neighbor, Vietnam. The literature suggests that Thailand needs to reform its education through major revisions in its structure and teaching practices. Thai teachers of English repeat the common refrain that learners lack interest and motivation. Studies suggest that learner-centered pedagogies with ICT and teachers' empowerment and support are key enabling factors that promote learners' educational success (European Commission, 2008; Craft, 2005; Sternberg, 2003). This study

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investigated students' creativity and innovation via project-based learning. The positive results illustrate that students learned successfully and produced unique and innovative results while also perceiving that online materials were beneficial, practical and easy to access. Moreover, the results point out that the support of qualified teachers is essential for learning enhancement in EFL contexts.

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