

A Case of Equipping Malaysian ESL Undergraduates with 21st Century Skills via Digital Storytelling

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Abstract: Today's advanced economies and innovative industries have created a demand for knowledge workers with 21st century skills. Recent research studies have shown that the current mode of teaching and learning have not managed to adequately equip undergraduates with the desired 21st Century skills. Thus, there is a need to introduce more appropriate methods into the pedagogy. In recent studies, digital storytelling (DST) has been found to be effective in inculcating ICT literacy, inventive thinking and problem solving skills among students through involvement in simulated working environment. The process of creating DST which includes organize ideas, express opinions and construct narratives is also believed to be able to enhance students' communicative and collaborative skills. However, the extent this technology benefits students is still rarely examined in many Asian contexts, particularly in Malaysia. Hence, this study intends to address this gap in knowledge by investigating the effects of DST on 198 students undertaking an English for Academic Purpose course at a public university in Malaysia. A quantitative approach involving the use using a 30-item is used for collecting data in this study designed to explore the effectiveness of DST from the students' perspectives. The findings revealed that students in general were receptive towards DST despite facing some problems and challenges throughout the project. The findings and the implications of the study will be discussed in this paper.

Keywords: digital storytelling, 21st century skills, English language teaching, technology-integrated teaching method

1. Introduction

In order to meet the demands of the 21st century, a variety of technology-integrated teaching methods have been developed and integrated into current approaches to teaching English Language. This is also seen as an initiative to enhance the teaching and learning of English language in Malaysia as research shows that a majority of Malaysian undergraduates have poor command of English language despite getting 11 years of formal education previously in primary and secondary school (Naginder, 2006; Nor Hashimah, Norsimah, & Kesumawati, 2008). In the Malaysian higher education context, it is generally felt that technology-integration into language learning will boost efforts to increase the proficiency level and related 21st skills of Malaysia university students thereby equipping them with the necessary skills that will enable them to secure good jobs in the market place. This view is supported by numerous studies which have shown that technology makes language learning more engaging, faster and easier (Kessler, Bikowski & Boggs, 2012; Hafner & Miller, 2011; Nance, 2000). On top of that it also equips students with the necessary 21st century skills such as learning and innovation skills (critical thinking and problem solving, creativity and innovation), digital literacy skills (information, media and technology literacy), and life and career skills (initiative and self-direction, leadership, and adaptability) (Trilling & Fadel, 2009). Dumont and Instance (2010:20) also refers to 21st century skills as "a range of so-called 'soft-skills' including good team-working". Robin's definition (2008) of 21st century skills will be used as the working definition for this paper. The skills are listed below:

- Digital literacy - the ability to communicate with the rapid-developing community to discuss current issues, collect information and seek for help;
- Global literacy - the ability to read, infer, respond, and contextualize messages from a global perspective;
- Technology literacy - the capacity to utilize computers and other technological tools to enhance learning, productivity and performance;
- Visual literacy - the ability to understand, create, and communicate using visual images; and Information literacy - the ability to search, assess, and synthesize information.

(Robin, 2008:224)

2. Digital Storytelling

One of the technology-integrated pedagogical tools that is growing in popularity is digital storytelling (DST). It combines conventional storytelling with a variety of digital multimedia such as still images, video clips, voice narration and background music to create a set of slides accompanied by narration or music. Robin (2006) classified DST into three major types; personal narratives, historical documentaries and stories designed to inform or instruct the audience on a particular concept or practice. Students are free to exercise their creativity as opposed to the bullet-form power point which has limited flexibility and diversity.

Research studies have shown that DST can promote the development of student-centered learning, project-based learning and reflections leading to deep learning (Barret, 2006; Robin 2008). Salpeter (2005) found that DST as a project could help students improve their research skills, organisational skills and increase students interest in the content subject. Although using DST requires extra effort from students as they have to take on multiple roles (as narrator, director, script writer and editor), they also gain benefit at the same time in the sense that they are able to develop soft skills by working together in a team (Beckett & Slater, 2005; Hafner & Miller, 2011; Robin, 2006). A few small-scale studies have been undertaken on DST focusing on its use as a teaching aid in Malaysian schools and the findings have been generally positive (Cut Nora Azizah, 2010; Salimun, 2011). However, no study has been undertaken on the use of DST to teach English in a Malaysian university especially on students creating their own digital stories; hence this paper which examines the perceptions of a group of university students towards the extend DST helps them to develop 21st century skills, is both timely and crucial.

2.1 *The DST project in the English for Social Sciences Course*

The English for Social Science (ESS) course is a compulsory course for all Faculty of Social Sciences and Humanities students at the National University of Malaysia. Starting from Semester 1, 2011/2012, the course evaluation component has been redesigned to resolve several issues reported by the course instructors. Lack of motivation to learn especially among low proficiency students had led to problems such as poor attendance, inattentiveness and also passiveness in the classroom. In addition to that, it was felt that one of the previous evaluation components which required students to post a summary of articles on a specific topic onto a blog needed to be replaced because it was neither interactive nor critical. Majority of the students also had a high tendency of plagiarizing by copying and pasting materials from the Internet into their summaries. In view of that, the DST project was introduced.

Figure 1 below is the summary of the procedures that the students had to undertake for this project. It is based on Robin and Pierson's (2005) four-step approach in creating and integrating digital stories into learning.

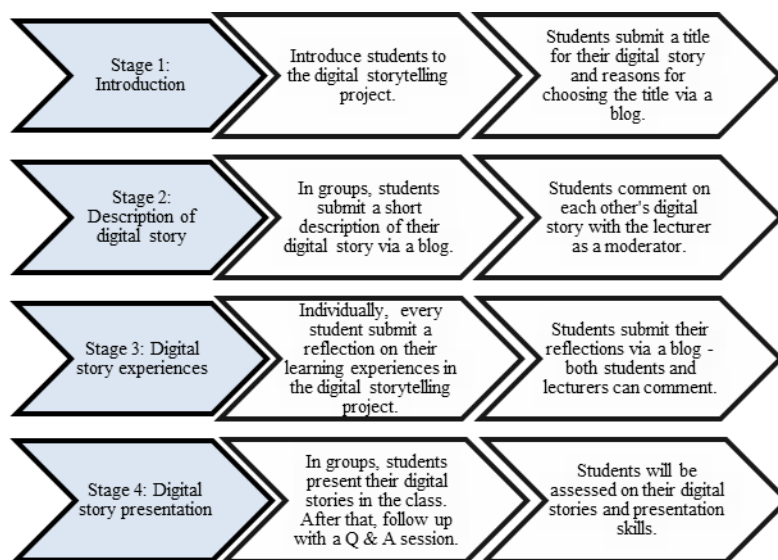


Figure 1. Description of the tasks and assessment involved in the project.

2.2 The Study

The research questions of this study are:

1. What are the students' perceptions of the effectiveness of DST in helping them develop the following 21st century skills:
 - (a) ICT literacy skills
 - (b) Critical thinking and problem solving skills
 - (c) Communicative skills in English.
 - (d) Collaborative skills
2. Are there any differences in perceptions between the Low Proficiency learners and High Proficiency learners? If yes, in what ways are their perceptions different?

3. Research Methodology

The sample of this study consisted of 201 ESS students with diverse English proficiency level, ranging from the lowest MUET Band 1 (very limited user) to Band 4 (competent user). MUET stands for the Malaysian University English Test. It is a test that is generally used to measure Malaysian university students' proficiency in English. These students came from mixed disciplines under the Faculty of Social Sciences and Humanities, National University of Malaysia. Most of them were in their first or second year of studies. The students were divided into two categories. Those with MUET Bands 1 and 2 were classified as Low Proficiency (LP) learners and those with MUET Bands 3 and 4, were classified as High proficiency (HP) learners.

This quantitative study employed a questionnaire consisting of 31 items designed to identify students' attitudes and self-perceived benefits towards their participation in the DST project. A four-point Likert scale (1=strongly disagree to 4=strongly agree) was used to measure each item. The questionnaires were distributed to all students undertaking the ESS course at the end of the semester, after their DST presentation in the 13th Wee. 201 questionnaires were returned. The collected data were tabulated and statistically analysed using SPSS version 17.

4. Presentation of Findings

The data were analysed using both descriptive and inferential tools. Item analysis and ranking were the descriptive tools used and the inferential tool used was a one-way Analysis of Variance (ANOVA).

4.1 Item Analysis

Item analysis was carried out to look at the pattern of responses from the respondents in order to gain an overview of how students perceived DST in terms of the 21st century skills under investigation. A four-point Likert scale (comprising 4 for strongly agree, 3 for agree, 2 for disagree and 1 for strongly disagree) was used to score the items. The data revealed that on the whole, LP learners agreed that DST helped in developing the various 21st century skills. However, to a certain extent, some did feel that the DST project was too time confusing. The mean scores of the HP learners followed that of the LP learner. They also indicated disagreement with negative items like difficult to work in group and getting confused over what they had to do for the project.

4.2 Item Ranking

The data revealed that four of the five highest ranking items for both groups were the same although there were some variations in positioning. The mean scores for the top-five items were all above 3.25 and the differences were very close. A difference worth noting was that Item 3 (In my group, all of us work as a team to complete the digital story) which ranked first for the HP learners was not in the top five item list for the LP learners.

A closer analysis of the items indicated that the HP group was more drawn into the collaborative nature of DST as the two items that ranked the highest were indicators of collaboration (item 3 & 2); meanwhile the LP group seemed to be more excited about the usage and the application of technology in creating their digital stories. The ranking also demonstrated that both groups seemed to enjoy the opportunity of channelling their creativity through planning and creating interesting digital stories (item 19).

The five items with the lowest mean scores were the same for both groups except for slight differences in mean scores. All these were negative items, thus, it could be deduced that students generally felt DST helpful. However, item 16 (Digital Storytelling project is too time consuming) scored slightly above 2.55 which inclined towards 'agree'. It could be surmised that students found DST a bit too time consuming, however, they did not find it a waste of time (item 14) and they did not find it difficult to work in group (item 4).

4.3 Comparison of mean scores

Inferential statistics in a form of a one-way ANOVA was carried to compare the mean scores of the two groups of students' perception in relation to (1) ICT literacy, (2) critical thinking and problem solving, (3) communicative skills in English and (4) collaborative skills in order to determine the reliability and validity of the descriptive findings. The thirty items from the questionnaire were classified according to the four aforementioned 21st century skills. Before comparing the mean scores of the grouping, it was necessary to determine whether the grouping of items was reliable. The Cronbach's Alpha reliability test was undertaken to test the grouping's internal consistency. The Cronbach's Alpha reliability value for ICT literacy was 0.83, for critical thinking and problem solving was 0.71, and for communicative skills in English was 0.91 which are all above 0.70 indicating that the grouping of these items was reliable except for collaborative skills which was 0.60. A possible explanation for the low Cronbach's Alpha value was due to the small number of items for collaborative skills compared to other groupings which had a minimum of 6 items each.

The mean scores of the items in the grouping were compared using ANOVA as tabulated in Table 1.

Table 1: Comparison of mean scores.

21 st Century Skills	Proficiency level	Mean	Std. Deviation	df	F	Sig.
ICT Literacy	Low	3.1820	.50437	1	2.153	.144
	High	3.0728	.53356			
Critical Thinking & Problem Solving	Low	2.9144	.39244	1	.039	.843
	High	2.9029	.41290			
Communicative skills in English	Low	3.0560	.47657	1	.047	.829
	High	3.0713	.50965			
Collaborative skills	Low	3.0899	.44927	1	.231	.631
	High	3.0575	.49265			

The results showed that there was no significant differences in mean score between the LP and the HP learners ($p < 0.05$) for all four categories which means that both LP and HP learners' perceptions of the four categories were relatively similar despite differences in proficiency levels. Another point to note is that the mean scores of all the categories are all higher than 3 or approaching 3 which further confirms the students' favourable opinion of DST in helping them enhance the various 21st century skills.

5. Discussion and Conclusion

The quantitative data analysis demonstrates that regardless of their proficiency level, the students felt that they had benefitted from the DST project. The general pattern indicated that they were very positive towards the innovation and agreed that DST helped them to develop the 21st century skills under investigation in this study namely ICT literacy skills, critical thinking and problem solving skills, communicative skills in English and collaborative skills. To what extent this was achieved would be discussed in another research study that explores the qualitative data in the form of focus group interviews and blogs. The students did point out the problem of the project being too time consuming although they did enjoy working together in groups. A comparison of HP and LP learners revealed that LP learners were more excited with the technology than the HP learners whereas the HP learners were more attracted by the prospect of working in group generated through this project than the LP learners. This suggests that the HP learners are probably more familiar with such technology hence they did not find it that exciting. Generally, Malaysian students in urban areas have higher proficiency in English and are more exposed to technology than students in rural areas (Majid, Muhammad, Puteh, & Bunari, 2008; Razak, Kabilan, & Silong, 2007). This is an area that the Ministry of Education is still trying to address in its efforts to narrow the gap in academic performance between urban and rural students.

It can be concluded that generally the findings of this study are in line with those found in other research studies. Hafner and Miller (2011) found that collaborative digital video (which is similar to DST in function) contributed to effective team-functioning among their students by nurturing their soft skills namely communicative skills, leadership skills and time management skills. In addition they also discovered that it was able to foster autonomy amongst them. A few earlier studies undertaken at the National University of Malaysia also supported the use of technology for teaching English as a Second Language (ESL). Thang and Bidmeshki (2010) also found the ESL students very receptive to the introduction of an innovation in the form of an online component for learning English for Science and Technology. Nadzrah, Hafizah and Azizah (2010) found that the use of blogs via the online discussion board to teach ESL benefitted the shy students and increased their level of confidence. Zaini, Kemboja and Supyan (2010), also reported that blogging helped to improve English writing proficiency. Thus it would appear that the National University of Malaysia and possibly other Malaysian Institutions of Higher Learning are ready for more creative and innovative ways of teaching ESL involving the use of technology. As Tapscott (1998) and Presky (2001) pointed out, our current generation of students is a generation that has grown up with technology and has been surrounded by it all their lives; hence they would be the group most willing to embrace methods in teaching involving technology. As educators, we should be aware of this and

make efforts to tap into this strength to enhance students' learning processes and their acquisition of the necessary skills to equip them for the modern workplace.

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