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A Study on User's Perception towards Learner-generated Comics

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ABSTRACT

Similar to computer games which are formerly intended copiously for amusement purpose, the adoption of comics in education has also been a subject of great interest among the scientific community. An abundance of research have been conducted on the cognitive and affective effects of comics in the past. However, few of these studies aimed at extending our understanding towards learners' perception, interest, and prior knowledge in educational generated comics. Therefore, this paper discusses student's motivation, obstacles, and requirements for the implementation and design of learner-generated comics. The findings of this study contribute to the literature by providing useful information for educators and instructional designers in formulating strategies for unlocking the potential of comics within classroom environment.

Keywords: Comics, Educational Comic, Instructional Design, Learner-generated Content
JEL Classifications: C610, C623, I23

1. BACKGROUND STUDY

Computer games and comics share an equivalent origin where both were initially designed solely for entertainment purpose, before the academia highlighted their educational values. Thus far, the usage of comics as an educational tool would have trigger a general negative response (Fischbach, 2014). Nonetheless, recent years have witnessed an alteration in how comics are being socially accepted where there is a growing appreciation towards comics which now are capable to address almost any subject, fiction and non-fiction, and all range of audiences' age (Gibson, 2010).

Nowadays, comics are not only a vastly appealing medium for learning language, historical and literary material (Norton, 2003) but they have also been embraced in science (Spiegel et al., 2013; Cooper, 2011), mathematics (Cooper, 2011; Cheesman, 2006), engineering (Metraglia and Villa, 2014), computer science (Cervesato, 2011; Zhang-Kennedy et al., 2016), and many other areas.

Despite this blooming good circumstances, an ideal comic research should consider users' familiarity with this medium (Caldwell, 2012). Plus, designing digital comics as a pedagogical activity is considered a new innovation especially in Malaysia. Henceforth, this paper discusses students' perception, motivation, obstacles, and requirements for the implementation and design of educational comics based on a survey conducted in this study. The paper is organized as follows. First, the impact and basic characteristics of educational comics and learner-generated comics (LGCs) are elaborated. This is followed by the approach used to carry out the data collection process and questionnaire design. Next, the findings of the survey are presented along with descriptive analysis of the results. Finally, the outcome of the study is reflected while the conclusion, limitations and suggestions for further research are put forward.

1.1. Educational Comics

Educational comic is used interchangeably with the term "Information Comic" as Alaba (2007) defined it as "a form of cartoons in which a cast of characters present an educational story in a sequence of closely related drawings designed to entertain and educate the reader." These visual media are specifically designed to extend students' erudition and foster engagement beyond the confines of the classroom. The

advantage of comics should not be dismissed as students expand comprehension meaning from the lively illustrations or interplay among panels, avoiding them from depending to solely on text-based reading strategies (Jennings et al., 2014).

According to Eisner (1985) and Azman et al. (2015), an educational comic is a subset of comics, categorized into technical comics that teach learners the procedures, process, and tasks which involve the reader to experience them in sequential form; and attitudinal comics which function as a visual narrative in conditioning learners' attitude toward a task. Learning and comprehension are facilitated by chunking difficult concepts in a form of juxtaposition of images and text, while progressively guide readers through the comic narrative (Zhang-Kennedy et al., 2016).

1.2. LGCs

The outburst of user-generated content online phenomena (Boyd and Ellison, 2007; Figueiredo et al., 2014; Seretan et al., 2014) provides novice computer users the opportunity to become designers of their own digital content. Subsequently, learner-generated content is a teaching approach based on empowering students to create their own contents (Torres and Guerrero, 2013). Lee and McLoughlin (2007) classified learner-generated content into pre-packaged authoritative content, guided learning materials, and student performance content. These learner-generated content media types may consist of videos, podcasts, computer games, e-portfolios, wikis, blogs, including comics.

LGC projects are a comic-based activity where learners themselves craft personalized comics in order to reach a pedagogical aim. This activity operates as a supplementary method for students to absorb difficult academic topics (Engler et al., 2008) and polish their research skills (Morrison et al., 2002). Aside from illustrating graphic novels with traditional materials (Williams, 2008; Wertz, 2014), recent classroom practice begin to interactively utilize digital authoring systems for LGC (Wertz, 2014; Meyers, 2014) involving photo-based and pre-made item-based comic development tools (Azman et al., 2016). Therefore, this study seeks to investigate the perception, problems, and requirements of educational comics and LGC by analyzing respondents' general feedback from the distributed survey.

2. METHODOLOGY

The study design employed questionnaire as the instrument for data collection. The study lasted for three days before analysis on collected data was performed. The respondents (students whose age ranging from 20 to 26 years) were randomly selected from Universiti Utara Malaysia (UUM) community. In order to assist their understanding on the topic of the questionnaire, an A2 sized poster of a comic (Figure 1) was presented. The comic exposed students to examples and benefits of educational comics. The questions were addressed to investigate the following aspects: (1) Respondents' background related to reading comics and their supporting technology, (2) respondents' perceptions towards comics as an instructional tool, (3) respondents' expectations and drawbacks of LGCs, (4) indication of digital tools that respondents feel are promising for LGCs development. A few basic demographic questions were included in the questionnaire. Finally, basic statistical method was used to assess the student responses which particularly using descriptive techniques as presented in the next section.

3. RESULTS AND DISCUSSION

The study as described above garners results as discussed in the next subsection.

3.1. Comic Reading Behavior

In the first question, the respondents were asked how frequent do they read comics in weekly basis. As depicted in Figure 2, nearly 60% of the students read printed comics once or more, while the rest rarely or almost never read comics. The frequency rate also shows that 70% of the respondents used social media to read online comics. Contrariwise, half of the participants downloaded comics from mobile apps stores while the other partial did not. These statistics revealed that there was a balance between respondents' preferences towards printed and digital comics. Plus, it is also indicated that comics are a common and non-isolated media among more than half of the students.

Second question asks why students read comics (Figure 3) where the questionnaire comprises of a 5-point Likert scales, 5-strongly agree, 4-agree, 3-slightly agree, 2-disagree, 1-strongly disagree. More than half of them agreed that comics are a fun leisure (55%) and able to reduce stress (51%). 28% of the respondents strongly agreed, and only one student disagreed with the both mentioned statements. Aside from that, the overall percentage reported that majority of students (73%) preferred comics because their message is effectively presented with less text and sequenced visuals.

Furthermore, students also agreed that comics helped them boost their mind and thinking skills (49%). About 30% and 19% of the respondents strongly and slightly agreed, plus only 2 students disagreed with the previous statement. Literally, students also stated their opinion whether comics inspire them to create their own stories in other forms such as novels or movie scripts. Overall, 95% of respondents found comics are useful for the mentioned purpose while only 5% did not in contrast. Based on the statistics, it could be concluded that comics are an easy and visually entertaining reading material which also amplify students' thinking and storytelling skills.

3.2. Views towards Educational Comics

Afterwards, when the students were questioned about the potential of educational comics, they were first asked if they have read educational comics previously. Amusingly, nearly 80% of the respondents admitted that they have past experience reading them (Figure 4).

The overall results exposed that majority of the students (97%) had come into a general agreement that that educational comics are able to teach moral and spiritual values (Figure 5). These respondents also entirely agreed that educational comics could help them remember and memorize facts better. Additionally, students also

Figure 1: A comic presented to respondents as an introduction to educational comics

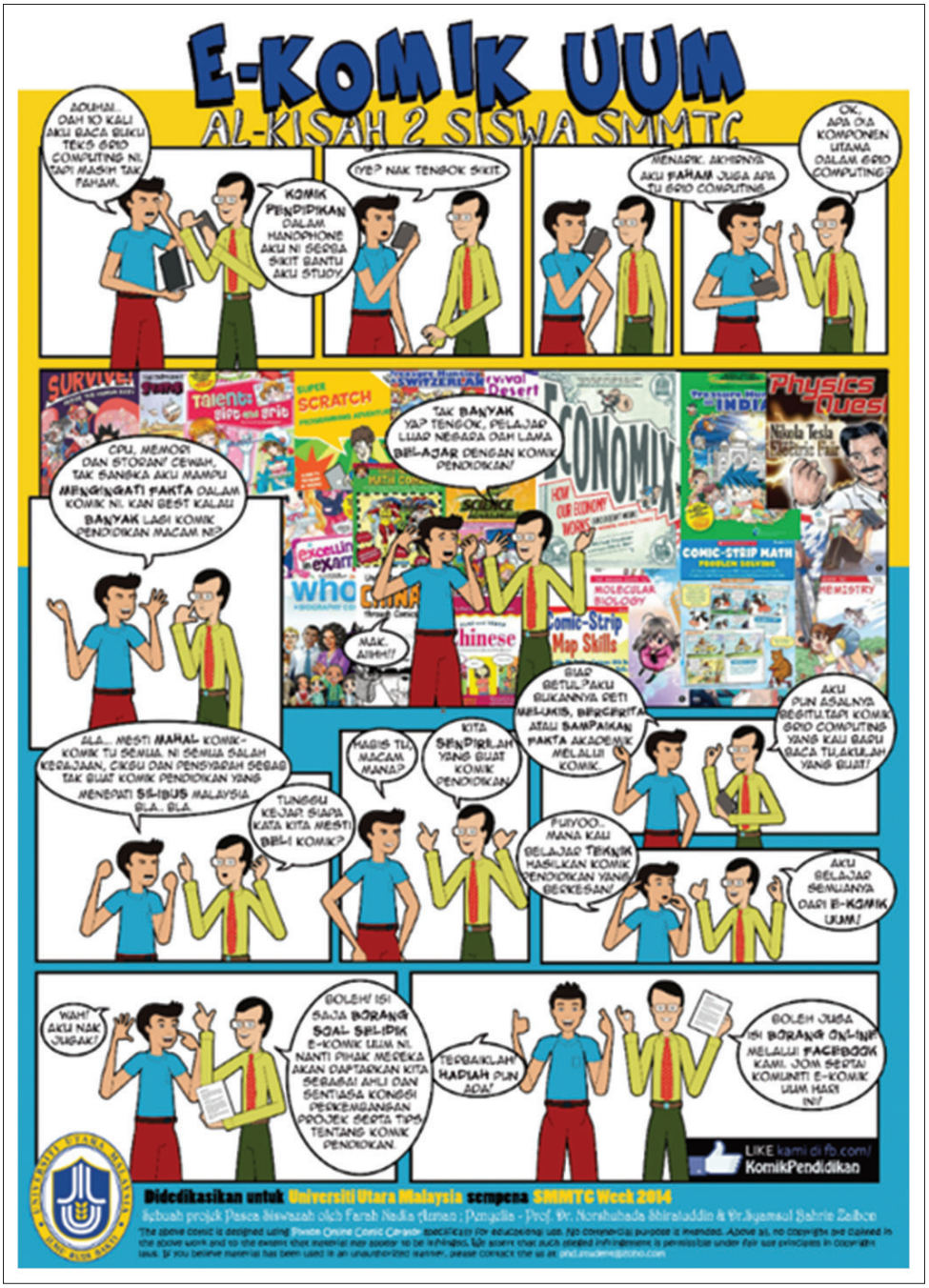
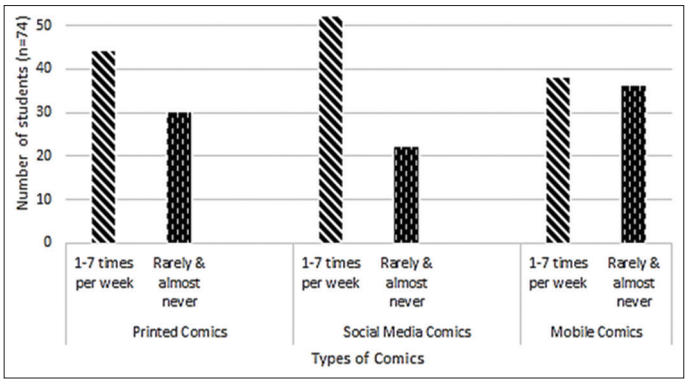


Figure 2: Comic reading frequency



majorly concurred that educational comics could assist them to understand difficult technical and scientific content. These findings align with prior claims that comics are able to assist students' comprehension (Mallia, 2007; Recine, 2013; Yıldırım, 2013).

Despite these affirmative views however, 88% of the respondents agreed that there is a shortage of educational comics that comply with Malaysian school syllabus as shown in Figure 4. These findings suggested that, although comics are a recurring material for entertainment purpose, students are fully aware with the values of educational comics. Therefore, it is important to recognize the potential of educational comics as a tool in improving students' learning experience.

Figure 3: Reason and motivation for reading comics

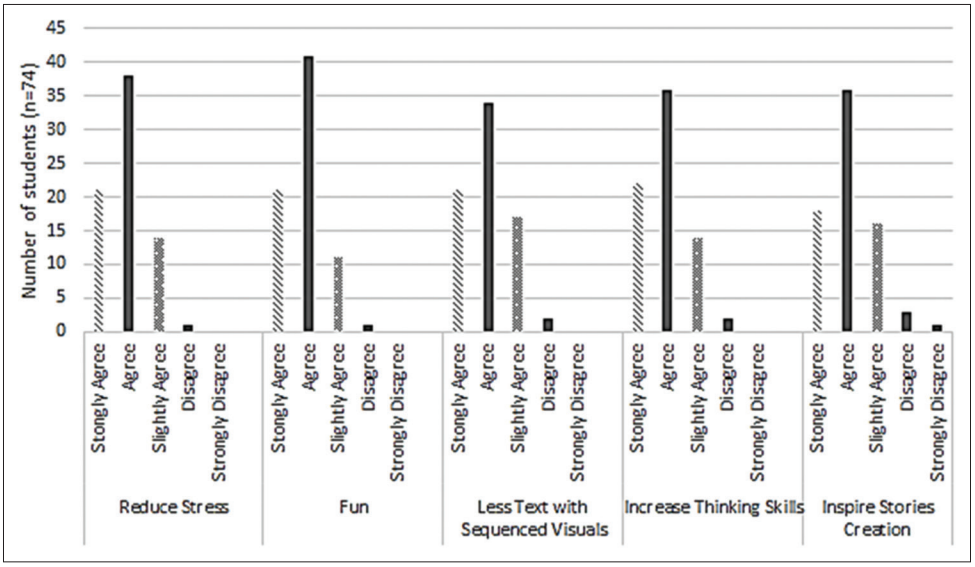


Figure 4: Educational comics general survey

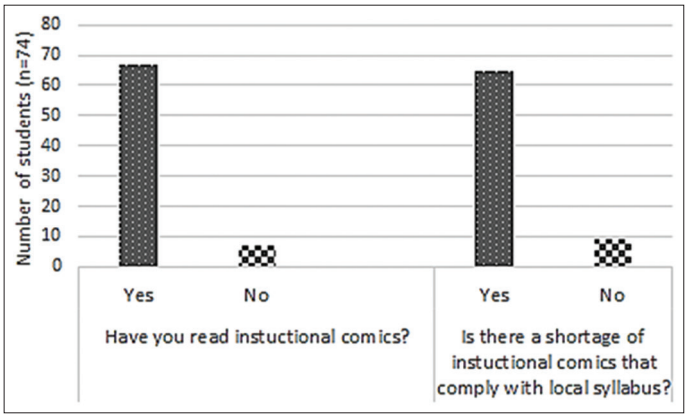
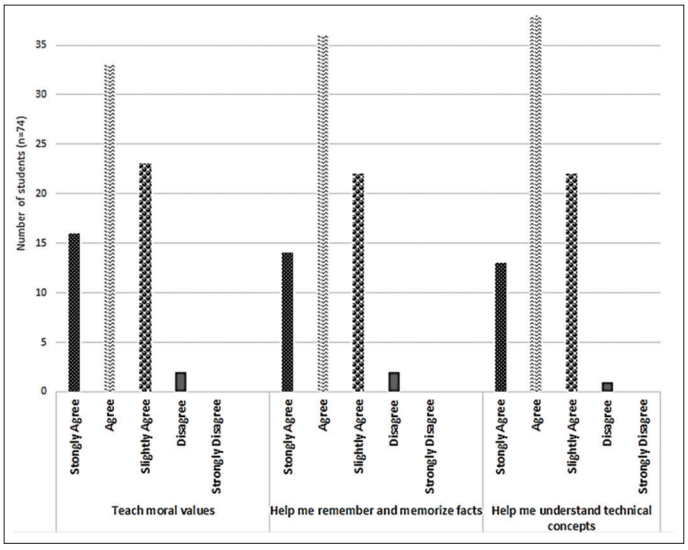


Figure 5: The didactic benefits of educational comics



3.3. Views towards LGCs

Next, students were given several questions in order to acquire their perception towards LGC. All 74 students responded to the questions depicted in Table 1.

As shown in Figure 6, most of the students (85%) stated that they were interested in developing educational comics to assist their learning (Q1) while the rest did not. 88% of the respondents agreed with Q2, Q3, and Q5, concluding that the educational comics they developed should fit learner's own personal taste, represents local image and identity, and contain more academic content than the story. However, a slightly higher percentage was achieved in Q4 where 90% of the students favored a balance between academic content and story in their personalized educational comic.

Inclusively, a vast majority of the respondents (95%) agreed with Q6 which displayed their hope that the educational comics created by them could be utilized as an educational resource for other students to a certain extent. These statistics described that, student not only showed high interest in LGC, but they also have certain criteria towards their creations, so that the educational comics could be a useful means for other learners besides themselves.

In addition, the survey also enquires students problems in LGC (Figure 7). Respondents were asked the difficulties they expected to confront while designing their own educational comic. The highest percentage exposed that the drawing and illustrating (96%) are the hardest tasks in educational comic development. Second, 93% of the students claimed their limited command in English to tell their story. Close to the second difficulty, 92% of the respondents disclosed they lack of expertise in demonstrating educational content.

Next, about 90% of them had limited knowledge in elements of a well-crafted comics. Lastly, 87% of the respondents agreed that composing stories and characters are also a challenge in educational comic development. Based on the result, it could be determined that majority of the students required a comprehensive guideline correspond to different aspects in order to lessen their difficulties in designing an educational comic.

Finally, the survey asks students' grasp in authoring tools that enable comic creation (Figure 8). 74% of the respondents asserted

that they have past experience using standalone graphic editing tools such as Photoshop, Illustrator or ComicLife. However, the result showed that half of the students have no familiarity in web-based comic development tools such as BitStrips, Pixton or MakeBeliefsComix. This finding reflects Melor et al. (2012)'s claim that comic creation during face-to-face class interaction is viewed to be impractical due to network constraints. Therefore, students prefer authoring tools that do not demand continuous internet connection to smoothly construct educational comics.

Table 1: LGC questionnaire

No.	Questions
Q1	I am interested to design an educational comic that could improve my understanding and recall a topic in my study
Q2	I would like to create an educational comic that fits with my personal taste
Q3	My personalized educational comic should contain more academic content rather than the story
Q4	There should be a balance between academic content and story in my personalized educational comic
Q5	My personalized educational comic must exhibit Malaysian image and identity
Q6	I hope my personalized educational comic could be used as an educational resource for other students

LGC: Learner-generated comics

4. CONCLUSION

The study measures the perception of students on comics as an instructional tool. The statistics revealed that there was a balance between respondents' preferences towards printed and digital comics. Comics are an easy and visually entertaining reading material which also amplify students' thinking and storytelling skills. Meanwhile, students not only showed high interest in LGCs, but they also have certain criteria towards their personalized comics, so that their creations could be a useful means for other learners besides themselves. These criteria include LGC should fit learner's own personal taste, represents local image and identity, and contain more academic content compared to story elements. Finally, students shown to prefer offline authoring tools in designing educational comics.

The overall findings appear to support that educational comics are a helpful medium to enhance learning experience. Principally, this preliminary study concludes that there is a huge potential in implementing LGC projects in formal classroom environment. On the other hand, majority of the respondents required more insight to different aspects educational comic development. Therefore, future research should emphasize the design of a comprehensive pedagogical guideline to improve comic-based teaching and learning strategies.

Figure 6: Views towards learners generated comics

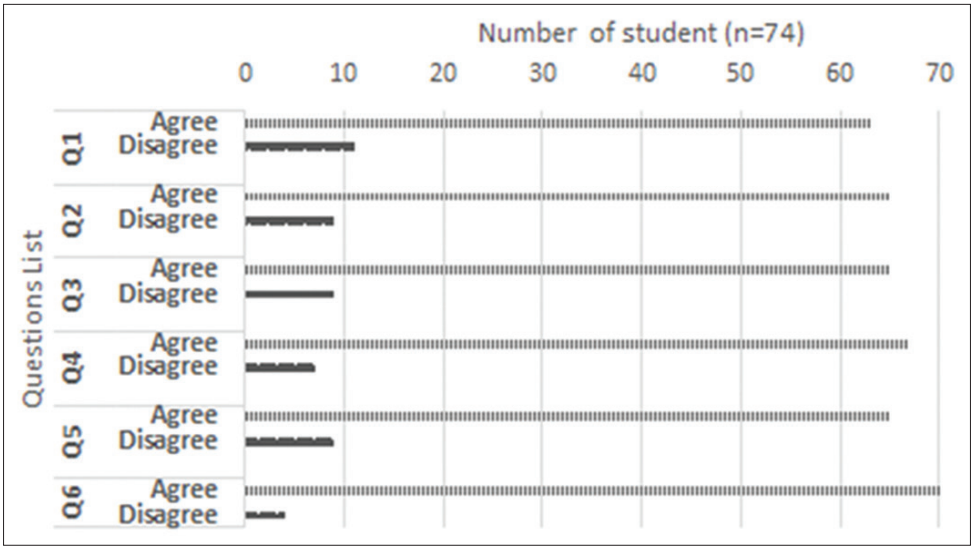


Figure 7: Respondents' perceived concerns towards learner-generated comic development

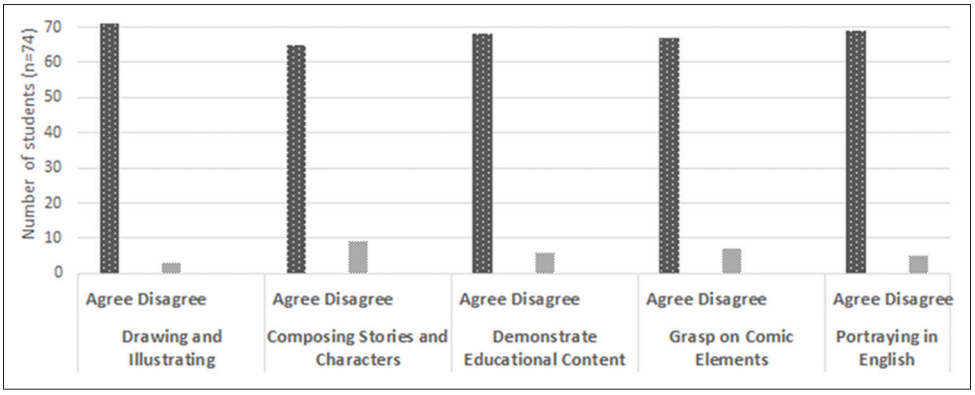
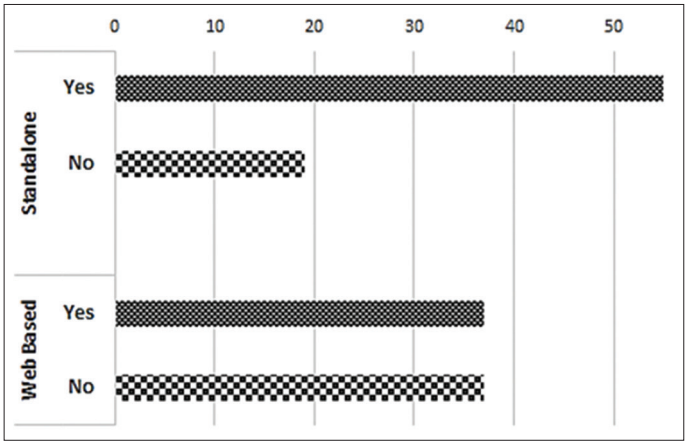


Figure 8: Preferred authoring tools for comic development



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