



## Evaluation on the Use of Online Comics among Students: Development Studies at Universitas Terbuka

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### Abstract

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Promotion is one way to spread information, so as to persuade/influence the audience to be willing to be loyal, accept, or buy towards a company or product. One form of promotional media that is effective in increasing the prospect of an object is online comics. Online comics are digital media that are dynamic and in accordance with technological developments. Based on this, this study aimed to evaluate the use of online comics among Universitas Terbuka students as a means of education and promotion. This research is development research using the ADDIE model with limitation of only on response test or evaluation of the use of online comics. The research was conducted by involving 60 students from various study programs. The data collection was done using an online questionnaire consisting of seven constructs with 34 questions related to evaluating the use of online comics. The data collected was then analyzed using SPSS version 23.00 for Windows. The results showed that the students' evaluation of the use of online comics in the seven constructs had an average of 3.11 in the "good" category. Therefore, students as agents of change in education are expected to be able to think openly about changes and alternatives offered by technology to improve the quality of learning.

**Keywords:** Evaluation, Use of Online Comics, Students, Development Study, Practicality

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## INTRODUCTION

The development of science and technology (IPTEK) has brought very important changes to various dimensions of human life. Angela explained that technology can support communication during activities, encouraging children to express and communicate their ideas, thoughts, and feelings (Canavan & Corr, 2006). The potential of technology is beneficial for the learning and for the development of young children (Taopan et al., 2019). Technology can be a powerful tool for transforming learning (Arsyad et al., 2014). Therefore, teachers have a critical responsibility to prepare for technology use and examine the impact of using technology on children in learning. As stated in the 2013 curriculum, there are two models of the learning process, namely the direct learning process and the indirect learning process. The direct learning process is an educational process in which students develop knowledge, thinking skills and psychomotor skills through direct interaction with learning resources designed in the syllabus and lesson plans in the form of



learning activities (Martiningsih et al., 2019). In direct learning, students carry out learning activities to observe, ask questions, collect information, associate or analyze, and communicate what they found in analytical activities (Maulina et al., 2015). The direct learning process produces direct knowledge and skills or what is called the instructional effect (Nursalam & Rusydi Rasyid, 2016).

The educational process cannot be separated from the learning process. According to Masykur, in the learning process, teachers provide knowledge as a provision for students to solve life problems (Masykur et al., 2017). The learning process will run effectively and efficiently if supporting media are available. The learning process will be effective, interesting and easier for educators in delivering messages by using tools or media. Media is one of the tools to convey messages or information made by teachers to students in the learning process. This is in line with Akbar's explanation, that the media are a means to transform or convey messages (Naz & Akbar, 2008). The use of instructional media is one of the important components in the learning process at schools (Muteheli, 2017); (Pernanda et al., 2018). The cognitive theory of multimedia learning emphasizes the combination of learning media in the teaching and learning process so that it can improve academic performance (Ngussa & Chiza, 2017). Technological developments can be combined with the advantages of comics to produce learning media that is useful for students. One of them is digital comic media. Raharjo explained that e-comics are a technology transformation of comic media. In the beginning comic books were printed into digital comics in electronic format. While using book maker software, students will be more interested in learning because it contains a more attractive display (Rasiman et al., 2014). Comics are a learning media that functions to convey instructional messages because comics are reading materials that are mostly favored by students.

Digital comics are media that have illustrations and storylines that are dynamic and easily adapted to technological developments (Ulfa et al., 2016); (Wang, 2016); (Bateman & Veloso, 2013). The uniqueness of digital comics is that the marketing process or distribution is easy and does not cost much. Promotion through digital comics has many advantages including being able to attract public reading interest, a lightweight form of comic delivery that is easily accepted by readers, and suitable for all groups (Kusuma Putra & Yasa, 2019). The effectiveness of comics is very promising as a medium of information and promotion. One study stated that promotion using comic media had a threefold increase in the aspects of information and knowledge when compared to leaflet media (Handayani, 2010). In addition, the use of comics as a learning media is due to the tendency that many people like and have read comics (Cary, 2006). This is because comics have some advantages including in pin-pointing problems and stating a comic media information that is more realistic when compared to verbal media, can minimize misunderstanding among readers, and can overcome space and time problems in its distribution, especially in online comics. Based on various literatures and reports, it is stated that there are 80% of comic readers worldwide (Cary, 2006). In addition, the use of comics in learning makes students be more motivated (Toh, 2009); (Smith, 2011), students describe comics as fun (Graham, 2011); (Cary, 2006), improves students' understanding and memory (Umainingsih et al., 2017); (Aleixo & Sumner, 2017); (Damopolii & Rahman, 2019), and the use of comic media is very attractive to students (Pratiwi & Sudibyo, 2018); (Maryani, 2020); (Haroky et al., 2019); (Buchori & Setyawati, 2015). Based on these descriptions, the researchers developed comic learning media on opportunity material.

The advantage of digital comics is that there is no need for a physical form (print) in their distribution. The distribution of digital comics is usually done online through websites and social media. Thus, digital comics are often referred to as internet-based comics (online comics). Social media is an internet-based platform that makes it easy for people to communicate without boundaries. The development of social media in Indonesia

is very fast. One of the most popular social media that has the most users is Facebook and Instagram (Phua et al., 2017); (Bossetta, 2018). The ease of using the internet and the large number of Facebook and Instagram users make promotional activities for a product or service effective. The massive spread of information on social media makes content spread throughout the world. However, to attract netizens' attention to some content is not easy. A good content on social media must have a unique and interesting character so that it moves the hearts of netizens to read and even spread the content. Therefore, digital comics are very suitable to be developed as content in a promotional event related to the lecture system at Universitas Terbuka (UT).

## METHODS

Respondents in this study consisted of 60 students from various study programs at Universitas Terbuka. Students selected to be respondents in this study were students who were active in the even semester of 2019/2020 academic year. One of the student selection criteria in this study was the use of internet facilities. Demographic information of respondents is presented in Table 1 below.

Table 1. Respondent Demographic Information

Variable	Categories	Frequency	Percentage
Residence Area	Village	18	30.0
	City	22	36.7
	Regency	12	20.0
	District	8	13.3
Gender	Male	21	35.0
	Female	39	65.0
Ethnicity	Malay	21	35.0
	Minang	8	13.3
	Java	13	21.7
	Batak	3	5.0
	Others	15	23.3
Age	19-25 Years	46	76.7
	26-30 Years	5	8.3
	> 30 Years	9	15.0
Profession	College student	48	80.0
	Teacher/Lecturer	11	18.3
	Entrepreneur	1	1.7
Certification Status	Certified	11	18.3
	Not certified	49	81.7

This study used an online questionnaire as a measuring tool. A questionnaire was proposed to measure student evaluations of the use of online comics in certain aspects such as deductive components, online comic construction, online comic technicality, ease of use, online comics efficiency, benefits, and interest. The questionnaire in this study consisted of 34 items with a Likert scale provided, where 1 - strongly disagree, 2 - disagree, 3 - agree, and 4 - strongly agree. The distribution of items on the online questionnaire is presented in Table 2. The reliability index of this questionnaire analyzed using Cronbach's alpha was 0.980, and interpreted as high and eligible for use in real research (Pallant, 2002); (Joseph F. Hair et al., 2006).

Table 2. Distribution of Online Comic Usage Questionnaires

Construct	Number of Items
Deductive component	5
Online comic construction	5
Online comic technicality	5
Ease of use	5
Online comics efficiency	5
Benefits	5
Interest	4

This research was a survey research conducted using a questionnaire given to students from various study programs at the Universitas Terbuka. Respondents were told that their answers were considered very important to be used in the research and they were asked to answer questions honestly. As an introduction, the researchers provided a brief description of Online Comics and their use in the learning process. The researchers clarify Online Comics as an instructional design to integrate technology in the lecture classroom. Online comics are uploaded using Instagram and Facebook. The address of the online comic developed by the researcher was: <https://www.instagram.com/anoteroteam/> dan <https://web.facebook.com/anotero.tim.3/posts/100595398394679>. Students were asked to open this link to evaluate or provide views of online comics by answering a questionnaire. Finding the Online Comics developed by the researcher on this link allows the researcher to get data easily without having to come to the research location. All data collection procedures were carried out using internet and email. The data obtained from the distribution of online questionnaires were then analyzed descriptively using the help of the SPSS version 23.00 for Windows.

## RESULTS & DISCUSSION

### *Results*

Online comics were evaluated by students as respondents by assessing seven aspects, namely deductive components, online comic construction, online comic technicality, ease of use, online comics efficiency, benefits, and interest. Detailed information about the average score for each aspect is presented in Table 3.

Table 3. Mean scores of the Seven Aspects of Evaluation

Online Comic	Mean	Std. Deviation
Deductive Components	2.95	.649
Online Comics Construction	3.13	.700
Online Comics Technicality	3.20	.732
Ease of Use	3.13	.676
Online Comics Efficiency	3.12	.691
Benefits	3.13	.747
Interest	3.08	.645
Valid N (listwise)		
Average	3.11	0.691

From Table 4.18 above, it can be seen to what extent the use of online comics according to students of Universitas Terbuka was at a good stage, namely the deductive component (2.95); online comic construction (3,13); online comics technicality (3,20); ease

of use (3,13); online comics efficiency (3,12); benefits (3.13); and interest (3.08). Students have a very good perception of the use of online comics because they have mode 3. Thus, it can be concluded that the students of Universitas Terbuka are students who have an average perception of 3.11 with a good category. For more details, the results of the online comic product developed by the author are shown in Figure 1.

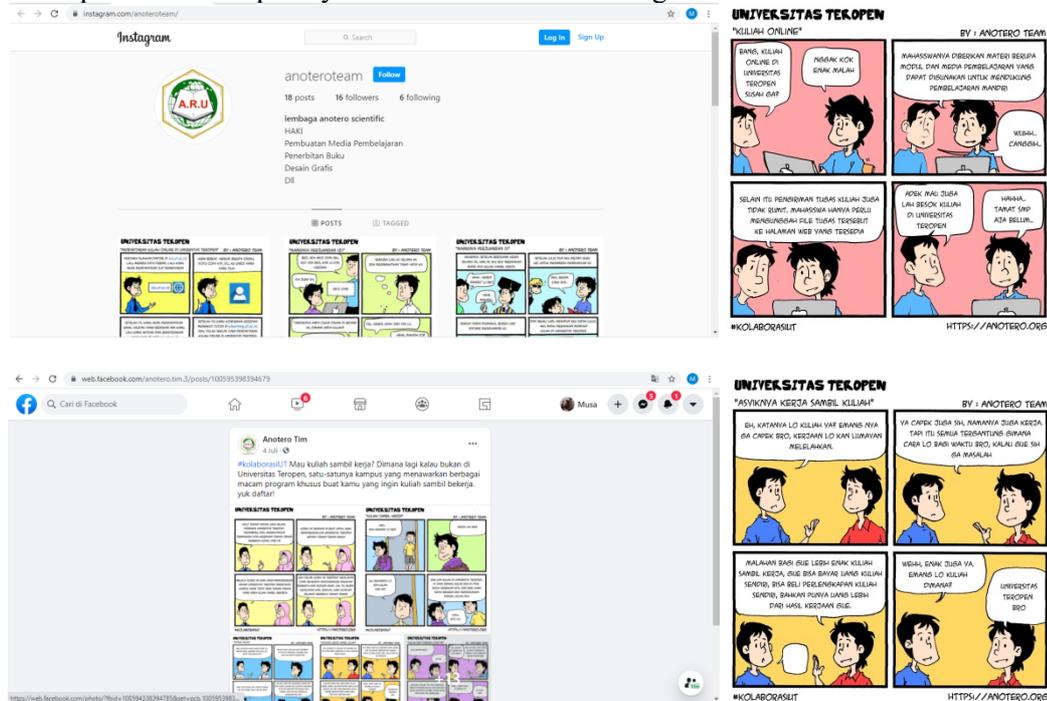


Figure 1. Online Comic Development Results

Figure 1 above provided information that the development of online comics is very interesting and has paid attention to technical elements, including the appearance of attractive comics, clear letters, the suitability of images with stories, text layout with proportional images, and suitability of background selection, able to provide education to readers about the advantages that Universitas Terbuka has and the advantages of continuing to study at Universitas Terbuka, and can be accessed anytime and anywhere online via social media.

Comics as a learning media have been widely used from kindergarten to high school level. Comics as a learning media can reduce boredom in learning because so far learning has been mostly done only by conveying material and theory and the only method used is the lecture method which increasingly makes students bored. The use of comics in several schools had actually been shown to increase average test results. The results showed that each of the aspects assessed in the use of online comics was responded well by students. For more details, it will be discussed in this discussion.

### Discussion

The research results showed that the use of online comics had fulfilled the deductive aspect, namely online comics respond to technological developments, can be used by the wider community and can be an educational media in the learning process. This result is supported by the opinion of one researcher who said that technological developments, especially in the digital world, have an impact on electronic comics created for comic fans (Ruiyat et al., 2019). Furthermore, it is said that electronic comics are a fun media that can be used in learning activities in the classroom, which have the advantages

of high mobility and distribution, and can be used to convey messages easily through stories so as to increase children's vocabulary and train children to be skilled in speaking (Faisal et al., 2017). Electronic-based comic presentation allows teachers to make comic stories more interesting by adding animation and sound elements to the presentation (Yuliana et al., 2017). Thus, the comics in this study uses thematic electronic comics that have never been used in previous research by providing pictures that are more curious and easy to understand.

The research results showed that the use of online comics had fulfilled the construction aspects, namely online comics as an educational media about Universitas Terbuka, presenting material in accordance with the community, having a clear structure, selecting clear story illustrations, and easy to understand. The results of this study are in line with the notion of comic media which is an illustration of images to make it easier for students to understand examples of the material presented (Danaswari et al., 2013). Comics present attractive images and easy-to-understand storylines that make students more interested in learning mathematics (Prihanto & Yuniarta, 2018). In addition, McCloud said that comics are also a media that can convey information or generate aesthetic responses from readers (Ratnasari & Ginanjar, 2019); (Riwanto & Wulandari, 2018). Thus, comics really help teachers in teaching and make it easier for students to understand lessons.

The results showed that the use of online comics met technical aspects, namely online comics have attractive appearance, clear fonts, images and stories that have a good suitability, proportional layout, and use of backgrounds that match the theme. The results of this study are in line with the opinion that the attractiveness of comics is influenced by several things, including: attractive appearance, the flow is coherent and easy to understand (Utariyanti et al., 2015). Furthermore, the use of comics as teaching materials had advantages, including: 1) comics have simplicity in their presentation, 2) contain dialogical verbal language, 3) it makes easier for readers to digest the material, 4) build readers' interest, 5) present the concept more clearly and interesting (Pernanda et al., 2018). This opinion is in line with the statement that the presentation of comics contains strong visual and story elements that have a strong relationship (Nengsi, 2017). Furthermore, another indicator that determines a good comic is that it has a match between the image and the story. This is in line with research which says that one of the aspects used in assessing the practicality of comic media is that the image already describes the story situation (R et al., 2018). In addition, the balance aspect that comics must consists of two criteria, namely the suitability of the size of the images and writing used in electronic comics and the balance of the layout of the writing used in electronic comics. This value is obtained because the type and size of the letters used are clear and easy to read and the color of the letters contrasts with the background color. This is consistent with the opinion that the important elements of the visuals, especially the words, should be in good contrast with the background (Smaldino et al., 2011).

The results of the above research indicate that the use of online comics met the ease of use aspect, namely online comics are easy to read/use, systematically arranged, as educational media about Universitas Terbuka, have a clear meaning in the story line, and are easy to access. This is in accordance with the opinion expressed by (Lova et al., 2013) and (Sari et al., 2014) which states that comic media is very practical to use, because it has material with clear images and is easy to read. When viewed from the contents of comics that have attractive images and clear colors, comic media can motivate students to be more active in learning. In addition, other studies also say that one of the aspects assessed in comic design is the type and size of comic letters that are appropriate and easy to read (Evelyn et al., 2015). Other studies also say that the comics used have clear instructions for use, use language that is easy to understand, encourages curiosity, increases knowledge, adds to their insight, the examples used are clear and the writing used in comics is easy to

read (Listiyani & Widayati, 2012). From some of the opinions above, it can be argued that the use of this facilitation aspect is intended so that students want to participate in learning enthusiastically, so that the subjects will be more easily recorded in students' memory.

The results showed that the use of online comics met the efficiency aspect, namely making an understanding of Universitas Terbuka that is efficient, can be read anywhere and anytime, and the durability of program. This is reinforced by several considerations in the use of comics, including: 1) In general, children like to read comics, 2) Comics can be read anytime and anywhere, 3) Comics can be read by all groups, 4) Comics can be used as an alternative learning media (Ironita et al., 2020); (Yuliandari & Yeni, 2020). In addition, comics are able to present a concrete picture of the story with illustrated pictures and dialogue to students, using comic media is easy for both teachers and students because comics can be read anytime and anywhere (Wibowo & Roysa, 2018). Another opinion also states that another convenience that digital comics have is the ease of access because they can be read online via a cellphone or tablet anytime and anywhere, can be stored easily, and sent to various other media (Hadhinoto & Oktavianti, 2020). Thus, the use of comics does not require other media tools so that they can be used anywhere and anytime.

The results of the study showed that the use of online comics has met the benefits aspects, namely Universitas Terbuka promotion events, education about Universitas Terbuka, motivation about Universitas Terbuka, increasing interest, and overcoming hoax news. This is in line with the definition of comics which is one of the learning media that is often used because it can increase student motivation, marked by an increase in the value of learning outcomes (Suparmi, 2018). In addition, the use of comic media can motivate and stimulate students to be enthusiastic about learning (Ambaryani & Airlanda, 2017). In addition, this comic media is also able to verify and evaluate information first before believing any information received (Monggilo, 2020). In connection with the rapid spread of hoaxes, increased distribution and production competence must be promoted massively so that it can keep up with the growing number of hoaxes. Another study said that the use of comics as an effective and efficient campaign media has been carried out, for example as a means of socializing safety riding as an effort to increase youth driving awareness in the form of interactive comic strips (Saputro & Haryadi, 2018). ). In other words, if a hoax spreads quickly on the internet, you have to fight it with the internet as well, one of which is using comic strips.

The research results showed that the use of online comics had fulfilled the aspect of interest, namely the content of the story can increase interest in Universitas Terbuka, increase the desire to follow the storyline, the belief to continue reading the webtoon, and be interested in reading every episode. This is in line with the opinion that comics containing images and supporting text can make students more interested in reading, so that comics can develop students' imaginations through the images in comics (Maryani, 2020). The results of this study are also reinforced by previous research which states that: 1) the use of comic media is effective in increasing students' reading interest in motion material (Pratiwi & Sudiby, 2018); 2) to increase students' interest in learning chemistry, learning using comic media can be taken into consideration by chemistry teachers as a variation in implementing chemistry learning (Marlinasari et al., 2018); 3) the comic-assisted scientific approach is proven to improve learning outcomes, scientific thinking skills, improve students' creative thinking skills and effectively improve students' scientific literacy (Aulia et al., 2020); and 4) the use of comic media has an effect on higher student interest in learning so that student learning achievement also increases as seen from the average student score which is better than using only image media (Purnama & Ardianto, 2015).

According to research by Devy Indah Lestari & et al, it shows that science learning media in the form of comics have characteristics and contain indicators of analytical

thinking so that they are feasible and effective to improve students' analytical thinking skills and scientific attitudes (Lestari & Projosantoso, 2016). This is consistent with the statement that most of the students agreed that the science comic book helps them to learn through simplifying science concepts and understanding the topic more accessible. The ideal science comic should also follow the right steps, appropriate aspects consisted, gain more science experience for both students and teachers to enjoy the learning process” (Roswati et al., 2019). According to Khoiriyah, physics learning is more effectively assisted by physics comics in accordance with the results obtained by the researcher that students' attractiveness towards comics obtained an average score of 3.38 and convenience in learning was obtained a value of 3.38 (Khoiriyah, 2019). In addition, the response to comics as a learning medium is also good, this is evidenced by the results of field tests also support this, which can be seen from the percentage of response assessments obtained by teachers as much as 86% with a positive response and students as much as 86.5% (Noer & Abrori, 2018). Therefore, the use of comics can not only improve student learning outcomes, but also increase student interest in learning.

## **CONCLUSION**

Based on the results and discussion, it can be concluded that the evaluation of the use of online comics among students as an educational media is in a good category. This can be seen from the seven components, namely the deductive component (2.95); online comic construction (3.13); online comics technicality (3.20); ease of use (3.13); online comics efficiency (3.12); benefits (3.13); and interest (3.08). Students have a very good perception of the use of online comics because they have mode 3. Therefore, it can be concluded that the students of Universitas Terbuka are students who have an average perception of 3.11 with a good category. Students as agents of change in education should be open-minded to changes and alternatives offered by technology to improve the quality of learning. They should take advantage of the Online Comics provided on the internet or create their own Online Comics to be applied in their teaching and learning process. However, the skills to find meaningful information to be used as a resource in Online Comics are needed. The selection of social media links as a source of information must meet students' needs for meaningful learning. The reseacher suggest that a preliminary study be conducted to determine the effectiveness of using Online Comics in the learning process. In addition, learning can also be done by students to find out their perceptions of Online Comics.

## **CONFLICT OF INTEREST**

This paper also describe our original work and is not under consusderation by and any other journal. All authors approved the manuscript and this submission. The three co-authors do not have any conflict of interest regarding this manuscript. This document was reported as the result of the research we conducted as one of the requirements of our responsibility as a researcher in our university.

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