Perception of 21st Century Learners to The E-Books as A Learning Resources

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Abstract. This present study was a survey research which has aims to know the perception of 21st century learners to the E-books as a learning literacy and resources. Subject of this research is a university students in Makassar, whose study in the university that manage by government. Sampling technique that researcher used in this study is a simple random sampling. The total of sample in this study is about 338 of university students. For the collecting data researcher used questionnaire that consist of 5 likert scale. Each item that used in this questionnaire had developed from 9 indicator about the criteria of learning media based on the software aspect, and each item also had been checked by expert and compute the data from expert by using IOC (Indexes of item-Objective Congruence) formula. Based on the IOC analysis there are 23 item that can be used as statement for questionnaire. Reliability analysis also used in this study, which the score of reliability is .869 that means alpha value is accepted. The result of this study also provide a different percentage for each item of questionnaire, this thing happen because every individual has a different experience in using of eBook as learning literacy. However, In this study show that respondent answer each item in positive feedback.

Keywords : 21st Century Learners, E-books

INTRODUCTION

In educational system, learning media are very important in the support of learning process. According to Talabi (2001) as cited Seth (2009) said that asserts that instructional media are generally designed to provide realistic images and substitute experience to reach curriculum experiences. The media are considered the most efficient facilitators in the education set up. They are not substitutes for the teacher.

Nowdays, The innovation of technology information make all the transfer of information is easier than before. Only using the tip of our finger, we can find all the thing that we want to see in this world by using our smartphone, PC, Tablet, and the other gadget. The phenomena that happen in the others part of our world we can update and access only a few second. And now, the development of technology of information was changing the human life style. To be able to survive in the changing of the time and follow the new trend. This reason become a fundamental reason for the educational expert to create some innovations on instructional media. One of the innovations that we can see its presence today is electronic books or sometimes we called e-Book. The definition of e-Book that state by Connaway (2003), is based both on emulating the basic characteristics of traditional books in an electronic format. The education expert also predict an existence of e-Book in the future that will be usefull as a instructional media for students. The important factor that can guarantee the existence of e-Book in the future is a development of Internet access. According to the survey data that released by International Telecommunication Union, the increasing of internet users are increasing every years. In 2013 there 40% of world population was using internet, then if we compare in 2010 only 30% of world population had used internet.

The problem todays is not about the development of e-Books itself. But the public's interest in reading the e-book is still very low then if we compared with the conventional book (Paperback/hardback books). This fact provide by the survey data that taken by DJS Research (2013) about reading habits surveys which show that only

28% people stated that they read hard copy books every day, with a further 22% reading them once or twice (10%) or several times (12%) a week. Nearly a fifth (18%) never read hard copy books. Reading of e-books is much more limited, with 71% stating that they never read them. It can be conclude that the development of technology and information still not give a significancy changing of public interest to use the new innovation media.

In this present study will try to assess the perspective of 21st century learners to the e-Book as a learning literacy. The North Central Regional Educational Laboratory and the Metiri Group (2003) that discuss about engauge 21st century skills was explaining about academic achievement in 21st century learning. One of that academic achievement is a digital age literacy. According to The National Literacy Act of 1991 as cited on The North Central Regional Educational Laboratory (NCREL) and the Metiri Group (2003) project defined literacy as "an individual's ability to read, write, and speak, and compute and solve problems at levels of proficiency necessary to function on the job and in society to achieve one's goals, and develop one's knowledge and potential". NCREL and the Metiri Group (2003) also devided digital age literacy into specific point, one of it is technological literacy which define as a knowledge about what technology is, how it works, what purposes it can serve, and how it can be used efficiently and effectively to achieve specific goals. The concept that researcher used based on the indicator that researcher take from Abdul Muis (2008), he said that there 9 indicator based on the software aspect that is: (a) Effective and efficient in the use of instructional media, (b) Reliable, (c) Maintainability, (d) Usability, (e) Accuracy in choosing the Type of Application/Software /Tool for Development, (f) Compatibility, (g) The Packaging of learning program media is integrated and easy in execution, (h) Documentation of Instructional Media program are Complete, and Reusability. In this study also the researcher try to give some additional indicator to measure the 21st century learners feeling by using e-Book

Finally, the survey and all of explanation on above prove that what is expected by the education experts regarding increasing the interest and the public interest against the electronic book still does not meet the criteria and objectives expected of 21st century skills which emphasize the students are required to have the ability to take advantage of technological developments as a source of literacy.

CONTENT AND METHOD

Population and Sample

The sample group consist of university students that the universities is a government management in South Sulawesi Province. The students population from the universities is about 76565 students. In this present study researcher try to conduct simple random sampling to choose representative sample from population by using *Taro Yamane* table and formula.

$$n = \frac{N}{1 + N e^{2}}$$

Based on that formula and table, the researcher take 398 students as sample by using level of confidence is 95% with precision level is 5%. In the process of data collection there is only 338 questionnaire that researcher received from the respondent. So, there are 60 respondent didnt fill and give bact to the researcher.

Data Collecting Technique

Method that used in this study is a quantitative method by using questionnaire, which is the statement consist of statement which asking respondent perception about electronic book (e-Book) as a learning literacy. The questionnaire that use in this study is close-end type, which consist of 5 likert scale. The questionnaire that researcher use are distribute into respondent with 2 ways that is offline questionnaire and online questionnaire (using google form).

Analysis Data

Data analysis is a procedure that all researcher have to conduct after collecting the data from the sample. In this study researcher try to conduct data analysis by using some statistical analysis to analysis content validity and reliability of questionnaire.

Content Validity

In this research use an Index of Item Objectives Congruence (IOC) to analyze content validity through the judgment of expert validator. The result from expert judgment will be calculated by using formula,

$$IOC = \frac{\Sigma R}{N}$$

IOC : means the congruence between the scales objectives and the items.
ΣR : means the total scores of the agreement of judges in each item.
N : means the total number of judges.

According to Brown (1996) as cited Pantahachart (2013) if the value of IOC is higher than 0.5, the test is acceptable due to its congruence between the test and content, but if it is lower than 0.5, the test is unacceptable because of the lack of congruence.

Reliability

Reliability analysis are using in this study to check consistency of respondent answer. The formula that researcher used in this analysis is Alpha Cronbach:

$$r_{11} = \frac{k}{k-1} \times \left\{ 1 - \frac{\Sigma S_i}{S_i} \right\}$$

r_{11} : Reliability.
K : Total Test Item
ΣS_i : Total variance score for each items.
S_i : Variance score
N : Item total

RESULT AND DISCUSSION

The result of this study is about to know about 21st century learners perception to the e-Book as learning literacy was divided by researcher into 3 part that is validity, reliability, and survey result.

Validity

In this study, researcher try to use 3 expert validator to analysis the questionnaire item through IOC format which consist of the design of the questionnaire. First concept of the questionnaire there are 27 item which arrange based on the indicator from review of literature. From the analysis of validity based on the expert show result as follow as

TABLE 1. Result of content validity using Item Objectives Congruence (IOC)

No	Indicator	Item	Scale			IOC score	categorized
			-1	0	1		
1	Effective and efficient in the use of instructional media. (The efficiency and effectiveness of media can adjust to the condition of the computer media based	The features of the e-Book can't give any trouble when I try to operate it.	-	-	3	1	Accept
		I just use small space in my gadget storage for e-Book file.	-	-	3	1	Accept
		The supporting software of e book that I used is not take a large room to my system to operate	-	-	3	1	Accept

No	Aspect	Statement					Result
	on an ability of the computer resources, such as CPU, RAM, etc)	It easier for me to share the file by using social media, blog, or email.	-	-	3	1	Accept
2	Reliable (The program said to be reliable or reliable if the program can run well, it is not easy to hang, crash or stops during operation)	I spent more time for waiting the process of system booting	2	-	1	0,3	Fail
		e-Book can still running however I do an mistake to operate it (High Error Tolerance)	-	1	2	0,7	Accept
3	Maintainability (can be maintained / managed with ease, by the program structure consist with system that organize and linkage with the other part so it can ease to manage or modify)	I need special and specific treatment to kept running my e-Book, including it supporting software	-	-	3	1	Accept
		I need to do the periodically update to supporting software for my e-Book	-	-	3	1	Accept
		I can integrate some features or software to my e-Book	-	-	3	1	Accept
4	Usability (media are easy to use and simple to operate by provide a position and design of navigation tool and any toolbar menu clearly to understand by user)	I just use simple step (double click) to open the e-Book file.	-	-	3	1	Accept
		There are many navigation toolbar to operate it.	-	-	3	1	Accept
		I can use standard cursor in my keyboard or mouse scroll as a navigator page in e-Book.	-	-	3	1	Accept
		Can use shortcut button to make a command.	-	-	3	1	Accept
		All the navigation and toolbar does not interfere during program was running	2	1	-	0	Fail
5	Accuracy in choosing the Type of Application/Software /Tool for Development	The supporting software that I use to open my e-Book is specific to open e-Book or similar file	-	-	3	1	Accept
6	Compatibility (media can use without trouble and error system)	It compatible for low specs and old model of gadget	-	-	3	1	Accept
		I must change some hardware to operate the program	2	-	1	0,3	Fail
		I can open the e-Book file in different Operating System (IOS, Windows, Linux, etc).	-	-	3	1	Accept
		The process of software update can give a trouble to open my e-Book file.	-	-	3	1	Accept
7	The Packaging of learning program media is integrated and easy in execution.	I need supporting software to open the file (Acrobat reader, Uread, Foxit Reader, Kindle, dll).	-	-	3	1	Accept
		I just click autorun to do an installation process automatically for the support software	-	-	3	1	Accept
		The e-Book file can't open without any installation process	1	2	-	0	Fail
8	Documentation of Instructional Media	There are user manual guide (like "readme") for operating the	-	-	3	1	Accept

	program are Complete.	supporting software						
		The installation process of supporting software are confusing users.	-	1	2	0,7	Accept
		There is help menu or trouble shooting menu to help the operate the program	-	-	3	1	Accept
9	Reusability (some part or all part of instructional media program can be reused to develop other learning media)	The single support software that aim to operate an e-Book can open various type of e-Book file which has different file extension (pdf, epub, mobi, cbr, cbz).	-	-	3	1	Accept
		I can use the supporting software of my e-Book to open other instructional media (such as graph, chart, etc)	-	1	2	0,7	Accept

According to the assessment of expert validator on the table 1 show that there are still some item that has not congruence with the indicator. There 4 item that has not a congruence between the indicator and it item. It means only 23 item that acceptable based on that analysis and can be used for a data collection.

Reliability

The result of reliability analysis that researcher conducted by using SPSS 17.0, show that the score of reliability is .869. This alpha value had taken from 338 respondent which answer 23 item of questionnaire.

Table 2. Reliability analysis

Cronbach's Alpha	N of Items
.869	23

According to Tavakol (2011), said that the acceptable values of alpha, ranging from 0.70 to 0.95. and he also said that the maximum alpha value of 0.90 has been recommended. It means the value of alpha that researcher got from statistical analysis has been accepted (.869 > .70).

Descriptive analysis

Table 3. Effective and efficient in the use of instructional media

Item	SA	A	N	D	SD
The features of the e-Book can't give any trouble when I try to operate it.	7,4%	36,3%	16,2%	35,1%	4,7%
I just use small space in my gadget storage for e-Book file.	15,6%	40,4%	22,1%	19,2%	2,4%
The supporting software of e book that I used is not take a large room to my system to operate	15,9%	43,1%	17,4%	21,2%	2,1%
It easier for me to share the file by using social media, blog, or email.	30,4%	37,8%	15,9%	13,0%	2,7%

Table 4. Reliability of instructional media

Item	SA	A	N	D	SD
e-Book can still running however I do an mistake to operate it (High Error Tolerance)	8%	37,5%	26%	26,5%	1,8%

Table 5. Maintainability of instructional media

Item	SA	A	N	D	SD
I need special and specific treatment to kept running my e-Book	7,4%	43,1%	26,3%	21,5%	1,5%
I need to do the periodically update for the supporting software	10,9%	32,7%	27,7%	25,4%	2,9%

for my e-Book

Item	SA	A	N	D	SD
I can integrate some features or software to my e-Book	7,4%	49,9%	26,8%	15,3%	0,3%

Table 6. Usability as instructional media

Item	SA	A	N	D	SD
I just use simple step (double click) to open the e-Book file.	18,3%	54,6%	13%	13%	0,9%
There are many navigation toolbar to operate it.	13%	40,4%	24,5%	17,4%	4,4%
I can use standard cursor in my keyboard or mouse scroll as a navigator page in e-Book.	19,5%	51%	14,7%	13,6%	0,9%
Can use shortcut button to make a command.	13,6%	49,6%	22,1%	13,3%	1,2%

Table 7. Accuracy in choosing the Type of Application/Software /Tool for Development

Item	SA	A	N	D	SD
The supporting software that I use to open my e-Book is specific to open e-Book or similar file	8,8%	37,5%	26,3%	26,5%	0,6%

Table 8. Compatibility

Item	SA	A	N	D	SD
It compatible for low specs and old model of gadget	17,1%	44,8%	23,3%	12,4%	2,1%
I can open the e-Book file in different Operating System (IOS, Windows, Linux, etc).	21,2%	53%	13,9%	10,4%	1,5%
The process of software update can give a trouble to open my e-Book file.	7,4%	32,8%	24,9%	29,9%	5%

Table 9 The Packaging of learning program media is integrated and easy in execution

Item	SA	A	N	D	SD
I need supporting software to open the file (Acrobat reader, Uread, Foxit Reader, Kindle, dll).	15,7%	51,2%	18%	12,1%	3%
I just click autorun to do an installation process automatically for the support software	8,6%	46,9%	27,7%	14,2%	2,4%

Table 10 Documentation of Instructional Media program are Complete

Item	SA	A	N	D	SD
There are user manual guide (like "readme") for operating the supporting software	10,3%	50,4%	27,4%	10,6%	0,9%
The installation process of supporting software are confusing users.	10%	39,5%	26,3%	21,5%	2,4%
There is help menu or trouble shooting menu to help the operate the program	14,5%	49,3%	25,4%	8,3%	2,4%

Table 11 Reusability of instructional media

Item	SA	A	N	D	SD
The single support software that aim to operate an e-Book can open various type of e-Book file which has different file extension (pdf, epub, mobi, cbr, cbz).	12,7%	55,2%	19,5%	9,7%	2,7%
I can use the supporting software of my e-Book to open other instructional media (such as presenting a graph, chart, etc)	13,9%	51,6%	19,8%	12,4%	2,1%

The result of survey that aim to evaluate the 21st century perception about eBook, which consist of 23 item that each item are developed from 9 indicator. The result show that each item has a various feedback from respondent. The different of respondent feedback are showing that every single person has a different experience in using eBook as literacy resources. Data on table 3 show the item question/statement are derived from the indicator of media about it effectiveness and efficientcy as a instructional media. Most of respondent answer the item based on their experience is agree answer, that means the error didnt happen when respondent operate the eBook, eBook and it supporting software only use small room in our gadget, and it easy to share the eBook via online system. Moreover, most of respondent agree that eBook that they used is compatible to all gadget and it can be used in all type of operating system (table 8).

The second indicator that focus on the reliability of eBook as a instructional media which show on the table 4. Most of respondent answering agree, means that eBook that respondent use is High Error Tolerance. Moreover, the respondent percentage whose answer disagree also has high percentage. Hence, the statement on table 5 show that the most of respondent answer agree that they need specific treatment to kept running their eBook. The other statement on the table 5 show about maintainability of eBook has a high percentage that answer agree. However, in the second statement show the percentage of respondent that choose agree and disagree are close enough. The researcher predict some of respondent used permanent supporting software that do not need to update the software, and respondent avoid the trouble in the eBook file after update it. The statement are showing on the table 8 "The process of software update can give a trouble to open my e-Book file.", most of respondent said agree to this statement.

The data for eBook Usability (table 6) showing that most of respondent answer for all statement based on their experience is agree. It means eBook that respondent use are easy to operate by using standard controller (such mouse and qwerty keyboard), although there are many toolbar in that eBook. Data for Accuracy in choosing the Type of Application/Software/Tool for Development (Table 7) show that majority of respondent are agree, if the suporting software is specific program that can open eBook and similar file. This statement also support with the last indicator about reusability which show high percentage that answer agree on the table 11 which statement said that supporting software can open a graph, shart, etc with the specific file extension.

Nowdays, most of eBook cannot be opened without using supporting software (Acrobat reader, Uread, Foxit Reader, Kindle, dll). There are 51,2% respondent said agree and 15,7% respondent strongly agree for this statement. Furthermore, the installation procedure of supporting software are very easy. According to the table 9 for the second statement, most of respondent said agree if they just click autorun icon to do an automatical installation. This study also evaluate about documentation of eBook as a instructional media program are complete, by provide some statement such as there are user manual guide (like "readme") for operating the supporting software, and respondent can find help menu or trouble shooting menu to help the operate the program. All of this statement has high percentage for agree answer by respondent.

CONCLUSION

From the result of this study that try to examine student experience using e-Book, the 21st century learners confirm that all the component e-Book that they use today is good based on the indicator that is: effectiveness of media, reliability, compatibility, usability, maintainability, reusability, accuracy of media, packaging and documentation of media. This statement supported by the answer of respondent which most of them give a positive feedback for each statement.

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