

STUDENTS' PERCEPTION OF COMPUTER-BASED TESTING- EDUBOX- AND ITS IMPACT ON THEIR ENGLISH LEARNING MOTIVATION

Amalia Rahisa Dewi

Department of English Education, Postgraduate Program, Open University, Indonesia
Email: dewirahisa@gmail.com

Andang Saehu

*Department of English Education, English Literature, Faculty of Adab and Humanities,
UIN Sunan Gunung Djati, Indonesia*
Email: andangsaehu@uinsgd.ac.id

Rahmat Budiman

Department of English Education, Postgraduate Program, Open University, Indonesia
Email: budiman@ecampus.ut.ac.id

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Abstract: Learning motivation as a part of learning process needs to be scrutinized by reason of it could trigger the students to achieve their learning performance successfully. There are no specific studies about students' perception towards Edubox as a kind of computer-based testing (CBT) and its impact to the students' English learning motivation. This study is intended to examine the relationship between students' perception about the use of Edubox as an assessment tool with their English learning motivation. Mixed methods are conducted to get more meaningful findings. Data collection is conducted through administering English test using Edubox, observation, questionnaires, and focused group discussion (FGD) as the primary data. Inferential statistics: T-test and Pearson correlation test are used to analyse quantitative data. While, the FGD result are analysed using Spreadly domain analysis method. 253 of 843 total populations are selected as the sample of the study utilizing stratified sampling. They take English test using Edubox, and are given questionnaires as well. Observation is done simultaneously by means of video recorders from smart phones during the English test administration. 30 students are chosen purposively to participate in FGD session. This study found that the majority of participants have negative perception towards the implementation of Edubox as the means to evaluate their performance in English; most specifically due to technical problems they encountered before and during the test. It is represented by the result of correlational test where r -value = 0,550 and t-test p -value is lower than α 0,000 < 0,05. This mean that the relation between students' English score of PBT and that of English score of CBT was significant. Ultimately, it is recommended to conduct preliminary study prior to implementing Edubox in any educational settings and to put extra efforts in minimizing technical factors that have influenced students' perception towards Edubox negatively.

Keywords: *Edubox; students' perception; English learning motivation; English learning performance*

INTRODUCTION

It has been suggested that computer-based testing method is an effective method since it provided the test-takers with immediate feedback on their performance on the exam (Wise, 2019). For some teachers, CBT brings some advantages, including faster scoring, accuracy, and reliability of results. In addition, teachers can create random test items automatically.

Edubox is the kind of CBT implemented at schools. It utilizes local server provided by the school. A semi-online system is applied to carry out the evaluation method using Edubox where the test items were sent to local server, then transmitted by the local server with offline mode to access point or Wi-Fi set in each class. Then, the test results are sent back to local server. The Edubox system assesses the validity and reliability of the test items and

processes the results of certain test such as calculating scores and providing feedback. The implementation of this testing mode has often caused internet connection problems due to the fact where students many times submit their answers simultaneously to the local server at once. This situation may sometimes cause the scores are not recorded properly. So, they must retake the test.

Some studies mentioned the role of students' perception towards computer-based testing and its impact to their English learning motivation. Such as a quantitative research conducted by Mahmoodi and Esfandiari (2016). They found that CBT could motivate the students to learn because of its higher accuracy. Additionally, Van der Kleij, Eggen, Timmers, & Veldkamp (2012) claimed that immediate feedback in CBT could influence the students' learning motivation which was reported to be useful for learning. Similarly, Sahin, Secer, & Erisen (2016) conducted the study about students' perception and motivation in learning English. The result of their study represented that positive perception has greatly impacted learning motivation. These studies clearly indicate that there is a relationship between the use of CBT with students' learning motivation. Jimoh, Shittu, and Kawu, Y. K. (2012) stated that conducive environment and the fast feedback of the test result can affect the students' positive perception towards CBT, even though the CBT made the students feel more threatened compared to taking PBT method. Besides, Dammas (2016) argued that one of the factors that can influence students' perception towards CBT is the prior to experience of computer system. Those who are used to computer will have fewer difficulties to do CBT, though they may encounter some technical problems in the test administration, the negative impact will be insignificant.

Previous studies concerning students' perception about CBT cited above did not specifically study the impact of utilizing Edubox (a kind of CBT enforced at public schools in Bandung, West Java) towards students' English learning motivation. Therefore, this study is expected to provide additional literature by conducting the research concerning how Edubox influences students' perception and motivation to learn English at the researcher's school in Bandung West Java.

Unfortunately, there are limited amount of studies have been conducted in this topic.

Therefore, the researcher cited relevant literature in the area of computer-based testing (CBT) to understand the nature of Edubox as one of the CBTs to answer the research questions.

The result of this research is expected to: (1) give information about students' perception toward the computer-based testing method, in this case Edubox as a media to evaluate students' performance; (2) enlighten teachers and test administrators who plan to develop computer-based test. (3) provide recommendation for two main stakeholders (the education district board and the ministry of education) in improving the test administration and educational policies related to Edubox implementation.

METHOD

Respondents

Total research population in this study are 843 students divided into; 320 7th graders, 296 8th graders, and 227 9th graders. The desired sample size is 30% of the total population. It is about 253 students comprising 96 7th graders, 89 8th graders, and 68 9th graders. They are selected using stratified sampling. The study is undertaken at the school where the researcher conducts the study. It focuses on students' perception towards the use of Edubox as a testing method and its impact to their English learning motivation.

All 253 students take English test using Edubox as part of their mid-test, and are given questionnaires as well. 96 students are observed while they are taking test using Edubox from different levels (32 7th graders; 32 8th graders; and 32 from 9th graders). Whilst, 30 students are chosen to participate in FGD session representing each grade selected from higher, mediocre, and lower achievers to gain more diverse perspective. They are chosen by means of purposive sampling.

Instruments

The researcher tries to triangulate the data by conducting four different data collection methods: 1) English test, 2) questionnaires, 3) observation, and 4) focused group discussion. All of the instruments are the tools to obtain primary data in this study. Meanwhile, secondary data is collected for some available documents such as the result of English PBT scores, English text books, and syllabus. The students' English PBT is then compared to the ones obtained by utilizing Edubox-

computer-based testing method to give better picture of the phenomenon being studied.

The test, questionnaires, and FGD items are reviewed by the experts to ensure test validity and reliability.

Procedures

Prior to conducting the research, the researcher requests permit letter to the principal of the school where the researcher conducted the study. Then, the process is continued by selecting sample for the research. Stratified sampling method is utilized to meet the needs for research participants. The next step is distributing questionnaires to 253 students from different levels (96 7th graders; 86 8th graders; 68 9th graders). The return rate was 100%.

Focus group discussion is then held with each grade discussing the topics stated on the FGD guidance attended by the total of 30 students (each grade is represented by 10 students selected from higher, mediocre, and lower achievers) to gain more diverse perspective. The discussion is recorded using smartphone voice recorder. It is divided into three sessions. The first session is administered to 10 eighth graders; the second session is attended by 10 ninth graders; and the third session is conducted to 10 seventh graders. Each session takes about 30 minutes to complete.

The observation toward 96 students from different levels during mid-semester English test schedule 2019/2020 academic year. It is conducted in two sessions following the school mid-test time allocation. The first session starts at 9.20 to 10.40 a.m. and the second one is at 13.00 to 2.20 p.m. 8th and 9th graders are observed simultaneously at 9.20 – 10.40 a.m. 7th graders are observed at 1.00 to 2.20 p.m. The researcher utilizes two video recorders on two smartphones which are held by tripod and conducts note taking to complement data gotten from the video recorder. The researcher as the first observer goes back and forth to take some notes while the second observers watch over the students

who is taking the English test. The results of observation are used as the triangulation technique to complement the FGD results.

Data collection techniques are then concluded by comparing the results of English test using Edubox with the ones the students get at their Paper-Based Testing (PBT) evaluation. This effort aims measuring the students' English learning motivation.

Data analysis

Data analyses are conducted by means of utilizing inferential statistics: t-test and correlational coefficient done by SPSS consultant. Furthermore, focus group discussion (FGD) is analyzed by implementing Domain Analysis Method proposed by Spradley (1979), including identifying, collecting, organizing, and representing relevant information in a domain. According to Spradley (1979), the first and second elements in the structure of a domain are cover terms (larger categories) and included terms (instances of the cover term). The next feature is semantic relationships. While, the results of the observation are triangulated with the data gotten from the questionnaires and FGD which served as additional information about actual situation during the administration of Edubox testing.

FINDINGS AND DISCUSSION

Students' perception and motivation mediated by Edubox contribute to their English learning performance

Based on inferential statistics: T-test and correlational test, the result of English test scores of 7th, 8th, and 9th graders indicated significant reduction when English test was conducted using Edubox. It is represented by *p-value* lower than *alpha* (0,000<0,05).

This infers that students scored better when being tested using PBT as opposed to Edubox as shown below:

Table 1. *Students' perception towards Edubox (CBT) and English learning motivation*

	English Score			<i>r-value</i>	<i>p-value</i>
	Paper-Based Test (PBT)	Edubox (CBT)	Gain		
Mean±Standard Deviation	62,757 ± 25,105	57,376 ± 25,928	-5,380 ± 24,225	0,550	0,000*
Median	75,00	57,00	-5,00		

Note: *Paired sample t-test *p*<0,05 (Significantly different)

Students' perception towards Edubox according to statistical data analysis in relation to their English learning motivation has a negative relationship. It suggests that students' English learning motivation would be less if they kept being tested using Edubox. It might be led by some factors that disrupted them while they were having the test. For example: incomplete test items, internet disruption,

unclear test item, inaccurate test items, some display items on limited or small smartphone screen, and procedure of taking test using Edubox. This fact is consistent with what Ryan and Deci (2020) explained that in educational field, extrinsic motivation (external drive) is influenced by some outward causes.

Table 2. *Motivation and perception mediated by Edubox*

No.	Statements		Respondent Answers Score					Total	Mean	Category
			SDA (1)	DA (2)	N (3)	A (4)	SA (5)			
1	The students want to study hard because of having English test using Edubox	F	4	24	117	86	22	253	3,39	Neutral
		%	2%	9%	46%	34%	9%			
2	The students want to prepare before doing English test using Edubox.	F	0	8	63	142	40	253	3,85	Agree
		%	0%	3%	25%	56%	16%			
3	The students get good score after having English test using Edubox	F	8	49	128	51	17	253	3,08	Neutral
		%	3%	19%	51%	20%	7%			
4	The students feel lazy to study if they have to do English test using Edubox	F	32	116	84	16	5	253	2,39	Disagree
		%	13%	46%	33%	6%	2%			
5	The students feel unhappy and uncomfortable	F	20	96	98	29	10	253	2,66	Neutral
		%	8%	38%	39%	11%	4%			
Average of students' motivation mediated by Edubox								3,07	Neutral	
6	The students feel happy doing test using Edubox.	F	18	53	72	66	44	253	3,26	Neutral
		%	7%	21%	28%	26%	17%			
7	The students feel easier doing test using Edubox.	F	5	33	105	77	33	253	3,40	Neutral
		%	2%	13%	42%	30%	13%			
8	The students feel confused with items display on Edubox.	F	8	39	71	105	30	253	3,43	Agree
		%	3%	15%	28%	42%	12%			
9	The students feel uncomfortable to do English test using Edubox	F	21	72	98	46	16	253	2,86	Neutral
		%	8%	28%	39%	18%	6%			
10	The students feel more difficult to do English test using Edubox	F	24	88	93	36	12	253	2,70	Neutral
		%	9%	35%	37%	14%	5%			
Average of students' perception mediated by Edubox								3,13	Neutral	

However, based on the questionnaires on table 2, when students were asked whether their perception and motivation toward Edubox contribute to their English learning performance, most students responded neutral to the statements. This result caused inconsistency in analyzing the data. A possible explanation is that there were some factors which led most students to respond that way. Students might think it safe and fast to answer

neutral. Other possible reason might be the fact that the questionnaires were distributed when the students were studying other subjects which impacted their concentration. It could also be influenced by some emotional factors (fatigue, bored, or dislike the activity) as well as the benefits they see in the activity (Beharu, 2018). Furthermore, the result of Domain Analysis proposed by Spreadly (1979) conducted to understand FGD data, depicted

some recurring themes that emerged during the process: (1) complaints about Edubox testing method, and (2) negative feeling associated with the implementation of the way to evaluate students' competence in English subject. Both themes implied that students have negative perception toward Edubox.

Below is the list of complaints made by the students:

- (S7.9) "My heart is pounding, Ma'am. I can't"
- (S9.4, 5, 6,7) "I'm afraid of making mistakes"
- (S9.6) "I'm afraid of possible server problems"
- (S9.10) "I'm afraid of making mistakes"
- (S8.1, 2) "Sometimes I am worried if I got exited"
- (S8.5) "Yes.Ma'am. If I got blocked the items may be reshuffled"
- (S8.9) "If I took longer time to think the screen got turned off, then I would get blocked"
- (S9.3) "No. The problem is it makes me feel dizzy, hmmm ... I do not know what to do with the box, the question setting was complicated. I was not motivated to read because of that problem, so disturbing"

Students also expressed their negative feelings towards Edubox. For example, they said:

- (S8.7) "Confused Ma'am"
- (S7.7) "Difficult"
- (S7.9) "Dizzy Ma'am"
- (S9.7) "Weird"
- (S8.9) "Difficult"
- (S7.5) "If the internet connection was interrupted, we would be logged out then it was hard to reconnect"
- (S7.1) "It's hard to connect to and "sakoja". But once we are connected it got easier to do the test"
- (S9.4) "It's quite hard to log in"

Those negative feelings would diminish students' motivation to learn English as well. Their English learning motivation affected their English learning performance as seen in table 1 earlier. These results reflect the research findings gotten by Macintyre and Vincze (2017). They learned that particular negative influences affected students' motivation in learning significantly. Moreover, learning motivation is also determined by the environment where the students exist (Santos, 2017).

The students' prior experience to online testing affect their English learning performance when tested using Edubox

Table 3. *The effect of students' prior experience being tested using Edubox towards their English learning performance*

No.	Statements	Respondent Answers Score					Total	Mean	Category	
		SDA (1)	DA (2)	N (3)	A (4)	SA (5)				
1	The students' prior experience of testing using Edubox make them comfortable to do the test using Edubox	F %	6 2%	29 11%	93 37%	100 40%	25 10%	253 100%	3,43	Agree
2	The students feel hard to cheat if they do English test using Edubox	F %	29 11%	75 30%	75 30%	54 21%	20 8%	253 100%	2,85	Neutral
3	The students feel easy after they did simulation for doing English test using Edubox.	F %	2 1%	12 5%	98 39%	97 38%	44 17%	253 100%	3,67	Agree
4	The students feel more confident to do the test using Edubox	F %	9 4%	43 17%	104 41%	65 26%	32 13%	253 100%	3,27	Neutral
5	The students feel upset if they get some troubles with their device while they are	F %	3 1%	12 5%	43 17%	94 37%	101 40%	253 100%	4,10	Agree

taking English test using Edubox										
6	The students feel upset if it is hard to login	F	4	16	47	95	91	253	4,00	Agree
		%	2%	6%	19%	38%	36%	100%		
7	The students feel hard to do the English test using Edubox if the item display makes them confused	F	7	16	59	114	57	253	3,78	Agree
		%	3%	6%	23%	45%	23%	100%		
8	The students feel upset if they have troubles with their device.	F	9	21	53	100	70	253	3,79	Agree
		%	4%	8%	21%	40%	28%	100%		
9	The students feel hard to do the English test using Edubox because they never had testing using Edubox before	F	25	102	88	27	11	253	2,59	Disagree
		%	10%	40%	35%	11%	4%	100%		
10	The students feel afraid of their answer will miss after submitting	F	7	15	33	118	80	253	3,98	Agree
		%	3%	6%	13%	47%	32%	100%		
Average of students' prior experience taking English test using Edubox								3,55	Agree	

From data analysis process (t-test and correlational test), the majority of the students agreed that their experience taking the test using Edubox affects their comfort in doing their English test. So, it influenced their English test performance as well. Meanwhile, the t-test result also indicated that their English scores using Edubox was significantly lower than the ones they got using PBT. This can be seen in table 1. Dammas (2016) noted that one of the factors that can influence students' perception towards CBT is their prior experience to computer system. He further noted that those who are used to computer will have fewer difficulties to do CBT, though they may encounter some technical problems in the test administration, the negative impact will be insignificant. In addition, based on Domain Analysis method towards FGD results, it was found that students encountered some technical problems while having the test Edubox: such as incomplete test items, internet disruption, and unclear test item. The obstacles had caused discomfort among the students. The results seem to be consistent with other study conducted by Jamiludin, Darnawati, & Uke (2018). They claimed that one of the factors that lead students' negative perception towards CBT was unstable internet connection which often interrupted the students while they were doing the test on the computer. Most of the students complained about unclear items that often made them confused. For example, they said:

- (S7.1) "There were lots of typos in the test items"
- (S7.3) "Sometimes the questions were missing or the answers were not accurate"
- (S7.1) "There were many wrong answers"
- (S7.5) "If the phone screen were turned off the items would be reshuffled"
- (S7.6) "Then the answers would be also reshuffled"
- (S7.2) "There were some incomplete statements that it's hard to understand"
- (S9.2) "The test items were supposed to be complemented with pictures to be understood, but there was no image could be found anywhere"
- (S9.5) "The setting of the test items was confusing"

In contrary to previous studies that suggested conducive environment and fast feedback of the test results provided by CBT can affect the students' positive perception towards the testing tool, even though it had made the students feel more threatened compared to taking PBT method (Jimoh, *et al.*, 2012).

However, the researcher assumed if some technical problems have been overcome, the students' positive perception will increase. In turn their English learning motivation will be enhanced as well. If the assessment is properly presented, it may augment students' motivation to learn (Umar, 2018).

Students' perceptions of Edubox as an assessment mode affect their English learning motivation

Table 4 *The students' perception towards Edubox as an assessment mode influencing their English learning motivation*

No.	Statements	F	Respondent Answers Score					Total	Mean	Category
			SDA (1)	DA (2)	N (3)	A (4)	SA (5)			
1	The students think that Edubox is a good media for evaluation	F %	7 3%	21 8%	88 35 %	100 40 %	37 15%	253 100%	3,55	Agree
2	The students think that Edubox can help them to increase their English score.	F %	12 5%	43 17%	121 48 %	63 25 %	14 6%	253 100%	3,09	Neutral
3	The students think that Edubox makes them easy to do the test	F %	3 1%	40 16%	104 41 %	74 29 %	32 13%	253 100%	3,36	Neutral
4	The students think that Edubox increases their spirit to study	F %	4 2%	38 15%	130 51 %	56 22 %	25 10%	253 100%	3,24	Neutral
5	The students think that Edubox causes their English down	F %	20 8%	96 38%	86 34 %	36 14 %	15 6%	253 100%	2,72	Neutral
6	The students think that Edubox makes them stressful because time running system	F %	29 11%	91 36%	78 31 %	41 16 %	14 6%	253 100%	2,68	Neutral
7	The students think that Edubox makes them lazy to study because they can find some helps through internet	F %	54 21%	107 42%	64 25 %	16 6%	12 5%	253 100%	2,31	Disagree
Average of students' perception of Edubox as assessment mode								2,99	Neutral	

Most students replied neutral to the questionnaires' statements related to their perception towards Edubox as an assessment mode. It can be concluded that their perception did not contribute much to their English learning motivation. This result seemed to be contradictive to their English scores using PBT as opposed to Edubox. It was also conflicting with the FGD Domain Analysis results which suggested strong correlation between students' negative perception of Edubox towards their English learning motivation.

In addition, the results of correlational test supported the argument that students were negatively affected by their perception about Edubox as an assessment mode. As mentioned in the literature review, Levitas (2014) claimed that perception is how a person acknowledges and interprets the information that she or he has gotten by means of senses and the way a person reacts to a particular condition. While, t-test score also suggested significant decline in their English test scores when being tested by means of Edubox. Possible assumptions to explain this phenomenon could be due to some factors. First, students' mood while

responding to the questionnaires. Secondly, the students might have difficulty to understand the statements on the questionnaires. Thirdly, the students might think that there were too many items to answer. As Afjar, Syukri, & Musri (2020) argued that students might be motivated to involved in learning by considering their attention, relevance, confidence, and satisfaction.

Moreover, the researcher also assumed that the absence of tangible consequences for not doing the questionnaires properly was one of the logical reasons for the tendency to answer neutral. So, they thought it was not important for them to do it seriously. Black and Allen (2018, p.16) stated "Rewards can induce at least some reluctant students to achieve in the short term."

In addition, the timing might not be conducive to administer the questionnaires. For example, the 7th graders did the questionnaires at 2 p.m. The students might be tired at that hour. Hence, it could lead them to finish the task as soon as possible. So, they did not think too much when responding to the questionnaires. Conducive environment should be considered to obtain their attention so they could

involve in learning (Afjar *et al.*, 2020). In this case, the researcher should have paid serious attention to ensure comfortable environment for the students to fill the questionnaires out.

The result of FGD represented that most students preferred PBT to Edubox. When they were asked which testing method, they liked the most: English test using Edubox or PBT. 29 out of 30 students responded as follows:

9 students from 7th grade opted: "Paper-based test"

10 students 8th grade opted: "Paper-based test"

10 students 9th grade opted: "Paper-based test"

What is more t-test result towards scores gotten using PBT versus Edubox as seen in table 1 supported the students' inclination towards PBT.

Contrary to the above finding, the study conducted by Nikou and Economides (2016) found that the students had positive perceptions towards computer-based testing and mobile devices-based testing so their learning motivation increased. Hence, it was proven that students' perception towards Edubox (CBT) could influence their English learning motivation in positive and negative way.

The factors that affect students' perception of Edubox as an assessment mode

Table 5. The students' responses about factors affecting their attitude towards assessment mode

No.	Statements	F	Respondent Answers Score					Total	Mean	Category
			SDA (1)	DA (2)	N (3)	A (4)	SA (5)			
1	The electrical obstacles should be considered	F	3	14	32	125	79	253	4,04	Agree
		%	1%	6%	13%	49%	31%			
2	The server capacity should be considered	F	0	3	32	118	100	253	4,25	Strongly Agree
		%	0%	1%	13%	47%	40%			
3	Items and instruction of items should be clear	F	0	0	22	102	129	253	4,42	Strongly Agree
		%	0%	0%	9%	40%	51%			
4	Supervisor should keep the test environment conducive	F	4	2	48	130	69	253	4,02	Agree
		%	2%	1%	19%	51%	27%			
5	Devices incompatibility should be considered	F	5	49	87	84	28	253	3,32	Neutral
		%	2%	19%	34%	33%	11%			
6	Internet trouble should be avoided	F	3	3	25	121	101	253	4,24	Strongly Agree
		%	1%	1%	10%	48%	40%			
Average of factors influencing students' attitude towards assessment mode								4,05	Agree	

Most students agreed to the statements about some factors that could influence their perception towards Edubox negatively. In line with this finding, Sanni and Mohammad (2015) claimed that some troubles in accordance with CBT could instigate the students' negative feelings. Whilst, Sahin, Secer, and Erisen (2016) stated that positive perception has greatly impacted learning motivation. Besides, Isauadewole, Olugbenga, Olusegun, & Susan (2018) stated that some problems encountered by the students in taking CBT, such as logging on, accessing software, submission of answer, editing, and security system could impact students' success in the assessment process.

In addition, referring to the result of domain analysis proposed by Spradley (1979), the students'

complaints and negative feelings emerged many times associated with the implementation of the Edubox as testing method. And the results of inferential statistics indicated that there was a consistency between themes found and the test scores. The students' English test scores using PBT were declining for all levels (7th, 8th, 9th grade) significantly when they were tested using Edubox. It attested that their negative perception affected their English learning motivation negatively. Sanni and Mohammad (2015) argued that the administration tests staff should upgrade their skill in administering test to minimize some problems that often faced by the students while having CBT mode assessment. The situation where the students took English test could affect their perception in turn their motivation to learn would low as well. As

Muslim, Hamied, & Sukyadi (2020) explained that one of the factors that could cause the students' low motivation to learn English is classroom learning situation.

CONCLUSION

Based on thorough data analysis and triangulation processes, this study provides some conclusions and suggested recommendations. First, students' perception towards Edubox according to statistical data analysis in relation to their English learning motivation has a negative relationship where the r -value = 0,550 and p -value lower than α ($0,000 < 0,05$), which means that students' English learning motivation were less when taking the test using Edubox. Second, from inferential statistics data analysis process (t-test and correlational test), it was attested that the students' prior experience to online testing affected their English learning performance when tested using Edubox. Third, the administering the questionnaires when students were having other class activity without proper encouragement to answer seriously and honestly caused inconsistent findings in this study. Forth, referring to the result of Domain Analysis, t-test, and correlational test, it is proven that the students' perception towards Edubox (CBT) could induce their English learning motivation in positive and negative way. In this specific study, their English learning motivation was negatively incited by the use of Edubox as testing tool. Fifth, incomplete test items, internet disruption, unclear test item, inaccurate test items, some display items on limited or small smartphone screen, and procedure of taking test using Edubox were the factors that instigated negative perception towards Edubox as an assessment mode.

This study found that most participants have negative perception towards the implementation of Edubox as the means to evaluate their performance in English; most specifically due to technical problems they encountered before and during the test. Consistent with previous research findings, students at the school where the researcher conducted the study scored lower in English subject when tested using Edubox as opposed to PBT. It can then be concluded that the utilization of Edubox as a testing tool has impacted students' motivation and achievement in learning English.

For future study, it is important to conduct preliminary study or needs assessment prior to

implementing Edubox in any educational settings to avoid similar problems in the future. Learning from the findings in this study concerning the significant decline in students English test scores, similar study should be replicated in other context to ensure consistency.

Questionnaires need to be administered at an appointed time with proper explanation and encouragement for the students to do the task honestly and seriously. Students need to be convinced that the study is conducted for their learning benefit. Educational institution should ensure that the students have positive perception towards any testing tools utilized in their learning context.

The use of Edubox at school where the researcher conducted the study needs to be revisited due to the findings of this study. It is also suggested that any stakeholders related to the use and implementation of this testing tool put extra efforts to minimize technical factors that have influenced students' perception towards Edubox negatively.

Lastly, the researcher expects to conduct future study about teachers' perception towards the implementation of Edubox at school. The study will serve as the means to illuminate the phenomenon in a more holistic and comprehensive manner. Hopefully this will help schools and policy makers to improve the effectiveness of utilizing Edubox as the assessment method in Bandung specifically and West Java in general.

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