

FOSTERING STUDENTS' ENGAGEMENT IN SYNCHRONOUS LEARNING USING INTERACTIVE WEB-BASED MEDIA

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Abstract: This research was conducted to investigate the implementation of BookWidgets to facilitate the students' engagement in synchronous learning through web-conferencing. The subject were students of Al-Madina Vocational High School from 11 OTKP, which involved 29 students. The objective of this implementation was to foster the students' engagement during synchronous class, to find out the way BookWidgets facilitated the students' engagement, and to reveal the most dominant students' engagement types when BookWidgets was integrated. This study was a nested mix-method, employing observation, interview, and survey to gather the qualitative and quantitative data. It was applied for four meetings. The result of this research showed that this implementation could engaged students behaviorally, emotionally, and cognitively. They presented positive behaviors, involvement, effort, positive emotion, achievement, and good self-regulation during their learning. The interesting features had created meaningful learning for students in terms of verbal participation, students' feeling and students' academic investment. The easy use features of BookWidgets made students enthusiastic and reduced the boredom which made them motivate and engage in following the synchronous learning. Based on the statistical data, BookWidgets facilitated behavioral engagement with 78%, emotional engagement with 76%, and cognitive engagement with 75%. From this result, it could be seen that BookWigets mostly facilitated the behavioral engagement. Two or more engagement types were possible to occur simultaneously, but the level of each engagement could be different.

Keywords: *students' engagement; synchronous learning; BookWidgets.*

INTRODUCTION

Due to the pandemic COVID-19 era, The Ministry of Education in Indonesia replaces the teaching and learning process with the online system. The term online learning refers to the learning process by a computer or mobile devices such as smartphone, laptop, and or personal computer. It can be implemented using an asynchronous, synchronous, or blended form. In synchronous learning, teachers and students are interacting and collaborating in real-time. It is supported by video conferencing or audio conferencing platforms, and it is similar to a conventional classroom, except that it is accessible online by all participants through the internet (Perveen, 2016). Therefore, the participants must present simultaneously from their different locations.

Many new problems elevated by educators during online distance learning. For instance, in explaining the materials, teachers just speech to the students and rarely use interesting media. It is affirmed that this learning strategy is fairly monotonous (Yuwanda, 2017) which cannot attract students' attention effectively so that students tend to be passive in following learning activities. In contrast, the students who participate actively in class seem to achieve higher academic rather than those who are inactive (Thomas, 2020). It can be said that when students learn actively in the class, it means they have a great motivation to learn, and when the students are motivated to learn, the students' engagements occur.

Students' engagement is how students were active, attending class, asking and answering the question, and attempts to conceptualize of

engagement (Fredricks, Blumenfeld, & Paris, 2004). They explain that students' engagement has numerous dimensions such as behavior (involvement and participation in academic and social activities), emotional (attitudes, interests, values, and affective reactions toward the class, teachers, classmates or school), and cognitive (motivation to learn and to use cognitive and metacognitive strategies in thinking and learning). This term covers the classroom activities such as being active in discussion class, doing their task, listening to the lesson, concentrating, obeying the role, and using strategy to solve their problems in learning. Therefore, students' engagement becomes crucial in the learning process; the linkage between students' engagement and student academic achievement is undeniable. Hence, it is necessary to apply effective instruction, interactive, empowering, challenging, entertaining, and motivating students to be involved actively. Moreover, according to Indiana University's High School Survey of Student Engagement (HSSSE), more than 81,000 students in 110 secondary schools in 26 states dropped out of school in 2007 because they were bored with the teaching-learning routine class (Astuti, Wihardi, & Rochintaniawati, 2020). In line with Seifert (2004, cited in Astuti et al., 2020), boredom happens due to the way instructional content is delivered, and students are not actively engaged in a lesson, so they lose the desire to learn. This state means that specific conventional tasks are tedious and inefficient.

Based on the demand for effective instruction above, it is necessary to organize the education by choosing suitable methods and media. Various forms of technologies can be used to fully enable students to engage in the classroom learning process. One of them is interactive web-based media. Web-Based Learning is an online learning medium or website with educational purposes, and many universities create science instructional content as a medium or repository of integrated science learning material (Wang, Cheng, Chen, Mercer, & Kirschner, 2017). The benefits of web-based learning over other learning methodologies are that it uses online technologies and the internet. It can be accessed at any time and from any operating system, like Android, iOS, and Windows. BookWidgets is one of them. BookWidgets is a web 2.0 application platform for creating interactive

learning materials, and it can be accessed by the web browser.

Deploying a descriptive qualitative and quantitative approach, this study described the implementation of BookWidgets as interactive web-based media in fostering the students' engagement during synchronous learning, explored the way BookWidgets facilitates the students' engagement, and investigated the types of students' engagement that are primarily presented in synchronous learning using BookWidgets. This research used the theory of students' engagement by Fredricks, Blumenfeld, & Paris (2004).

Many research investigated the students' engagement during teaching and learning processes, such as Rajabalee, Santally, & Rennie (2020) examined the association between students' participation in an online module and their overall performance by evaluating students' learning experiences in an online module. In terms of synchronous learning, Rahayu (2020) investigates students' experiences and perceptions of the implementation of synchronous e-learning through the Zoom conference method. Besides that, Francescucci & Rohani (2019) explore whether immersive, collaborative, real-time, instructor-led (VIRI) online learning provides the same student success and interaction outcomes as a face-to-face (F2F) course. In terms of application used, Menon (2019), in his research, demonstrated BookWidgets to encourage teachers to develop a highly immersive learning environment for blended learning or any online learning that serves as a compliment. The implementation of interactive web-based media in fostering students' engagement during synchronous class through web-conferencing is still new. Thus, this research is significant to investigate.

METHOD

This study employed a mixed-methods research design. It is an approach which combines and integrates qualitative and quantitative research and data in a research study (Creswell, 2014). The mixed-method types used is nested method procedures which one method is used as the primary method (Leavy, 2017). Nesting quantitative data in qualitative designs involves using a qualitative method as the primary method, and nesting a quantitative component in the design (Leavy, 2017). The first phase was a qualitative

exploration of BookWidgets implementation collected by observation, and the way BookWidgets facilitated the students' engagement collected by interview. Then, the second phase was developed by using an online questionnaire to build the first phase data in revealing the three dimensions of students' engagement which most frequently appeared.

The study was conducted at Al Madina Vocational High School of Cianjur. The school is located in Caringin Street, Limbangansari, and district of Cianjur West Java. In addition, this site was chosen because this school is able to conduct synchronous learning using web conferencing tools namely Zoom in their teaching and learning activities during this pandemic, so that it was suitable with the researcher's topic. The class that researcher chose was 11th OTKP (*Otomatisasi Tata Kelola Perkantoran*) consisted of 29 students. The research was carried out in four meetings. Furthermore, the researcher collaborated with the English teacher. In carried out the study, the English teacher had a role to teach and implement English material that is Cause and Effect to students. While, the researcher's role is an observer, who observes teaching learning activities during the synchronous learning process.

The main data was collected qualitatively through an observation and interview and quantitatively through a questionnaire. The classroom observation was done virtually through Zoom Meeting which were held four times. The used instrument were observation checklist where the several indicators of students' engagement has been provided on the sheet (Leavy, 2017), field notes were prepared to note down some aspects of the students' engagement which are not covered in the observation checklist, and video recorders to observe the whole process of teaching and learning. Moreover, the researcher interviewed five students at the end of the course. The students were chosen by the teacher based on the students' activeness both online and offline, cooperativeness in the classroom and also their overall English ability. The students were interviewed about their engagement and their feelings and thoughts in the learning process. Interviews were conducted after all observation sessions end through WhatsApp call. There were 21 pre-determined questions to be addressed for students which all are in the form of open-ended questions.

There were 23 positively worded statements provided in the questionnaire which were distributed to 29 respondents. All statements were developed based on Fredrick's notions on student engagement and were adjusted from National Survey Students Engagement (NSSE). The statements in the questionnaire were written in Bahasa Indonesia in order to avoid misunderstanding and to ease the respondents in filling the questionnaire. The scale value of the questionnaire was based on Likert-scale which underwent adjustment so that it consisted only four scales with different values; strongly agree, agree, disagree, strongly disagree. The questionnaire were designed to be completed online, via the internet. The researcher distributed the questionnaire to the participants in the end of learning process through Google Form: bit.ly/angket_bookwidgets.

The researcher analyze and describe the data separately, it is according to Leavy (2017), in mixed method research, the researcher may describe each set of findings in individual subsections of the results. In analyzing the qualitative data, the obtained data from observation checklist were organized. Meanwhile, the video recording and voice recording of interview were transcribed. Then, the researcher gave clearly label and mark up the transcript by using bold fonts consistently to address the research purpose and answer the research questions. Because the interview activity was using Bahasa Indonesia, the researcher translated the obtained responses into English. Then, the researcher classified the data into similar responses. After coded the data, the researcher looked for patterns and the relationships between codes. After that, the data was summarized, reflected, and connected to the theory which will gradually develop and feed into ongoing interpretation to find the meaning (Leavy, 2017). The data was elaborated by using the theory of students' engagement and the effect of utilizing technology in EFL classroom.

The questionnaire was analyzed based on a 4-value of Likert scale, which was primarily used to find the percentage of each statement that represented the construct of student engagement. Several procedures need to be completed in measuring the Likert scale according to the existing rules and procedures. The steps for measuring the Likert scale are as follows (Darmadi, 2011):

The collected data from the respondents was summed by multiplying the weight of each response by a predetermined point. In this research, the Strongly Agree response has 4 value, Agree has 3 value, Disagree has 2 value, and Strongly Disagree has 1 value.

After the total score of each statement was obtained, it was then changed into a percentage. The total score is divided by the maximum score, then multiplied by 100 percent. In this research, the maximum score was 116, obtained from the maximum value (4) multiplied by respondents' total (29).

After each statement's percentage score was obtained, it was interpreted based on range criteria to bring a more explicit explanation on which type of student engagement the students were engaged in. The range criteria were defined by finding the percent score interval (I). In this research, the interval score was 25% because its total score on the Likert scale was 4.

RESULTS AND DISCUSSION

The implementation of BookWidgets in fostering students' engagement

Quiz

After the students comprehend the material, they were given the exercise to build their knowledge about cause and effect. The exercise was in the form of Quiz with 5 questions. Teacher sent the quiz link to Google Classroom. Providing an online quiz as a regular exercise could help students maintain their performance by providing a fun and challenging environment. It lines with Luthfiyyah et al. (2021) stresses that, compared to traditional exercise, interactive game-based exercise will reduce students' anxiety. Most students are stressed and frustrated when they have to take an exam. Still, digital game-based tests include a more immersive and engaging task experience that allows students to enjoy the process, which can encourage their learning.

In this activity, the students were engaged due to their willingness in answering the questions. It could be meant that cognitive engagement was appeared, since it lines with Fredricks et al. (2004) that cognitive engagement is often referred to as academic investment during the learning process. They were thinking and willing to comprehend complex ideas of questions. Moreover, their activeness indicated the behavioral engagement

since this engagement is closely linked to participation included the involvement of academic. Those indicators could be meant that the students respond positively to the quiz, so that they were said to be emotionally engaged.

Split whiteboard

The teacher asked the students to read the text about "Water Pollution" then asked the students to find which sentence that indicate the cause and the effect. It was presented using "Split Whiteboard". The widget's board were split into two, the left board was presented the text, and the right board was empty, so that the teacher and the students could type the causes and the effects regarding the text. After reading the text, the teacher and the students were discussing about the causes and the effect of water pollution.

Based on the observation, the engagement appeared were behavioral engagement and emotional engagement. When the students read the text, it indicated the behavioral engagement since it lines with Lee, Pate, & Cozart (2015) stated that behavior engagement in online learning was performed by the students who read the course resources. Moreover, the students also involved in the discussion session in order to find the cause sentences about water pollution. Moreover, they also showed their enthusiasm in becoming volunteer to read aloud the text, although their pronunciation was not really good, but they were very confident to read and to answer the questions. It is following the statement that this type of engagement involves students' affective responses to the classroom, covering the excitement (Fredricks et al., 2004).

Split worksheet

Students were asked to read a conversation about smoking then discussed about its effect in order to answer the provided questions on BookWidgets. After that, the students had to be back to Zoom Meeting, and teacher started to discuss about students' answer together. The widgets used was Split Worksheet, the left sheet presented the conversation while the right split presented the questions in the form of short answer.

Based on the observation checklist 17, this activity was success to build the students' participation in discussion which included to behavioral engagement. It lines with Lee et al.

(2015) that behavior engagement in online learning is also performed by participation in interactive activities. Moreover, the discussion session was expected to increase the students and teacher communication, since emotional engagement in online learning is performed sense of self-worth while interacting with peers (Lee et al., 2015). And also to build the cognitive engagement which can be seen from the way students' mental effort and initiative to apply the new knowledge to different situations when selecting and evaluating relevant information and resources (Lee et al., 2015).

Crossword

The game cross word game was used to find the correct signal words in connecting sentences of cause and effect through BookWidgets. It was a fun game which was created from a list of words and descriptions. Students answered the 10 questions regarding the signal words of cause and effect then arrange it on the crossword box. Based on the observation, the students were excited to try to answer the question in turn, because the teacher offered the point to the one who could answer it correctly. This game was success to increase the students' interest which included to emotional engagement. It lines with Fredricks et al. (2004) that emotional engagement can be observed based on the students' positive feeling, such as being happy and interested. The crossword is a game that optimizes learners' thinking skills, and also be helpful for students as they try to retain new words especially about signal words of cause and effect. Moreover, it is proved that this game could enhance their interest and enthusiasm.

From their enthusiasm, it could lead to the behavioral and cognitive engagement. The way students competed each other to find the right answer also could be meant as they participate actively. This implied that the participation of students in learning can be seen by their actions in answering the question (Fredricks et al., 2004). Moreover, they invested their academic during answering question at a deeper level and comprehending the complex ideas. Therefore, it lines with Kennedy (2020) that in terms of online learning, cognitive engagement is reflected by students reflecting on and working through the learning material at a deeper level.

Find word

In order to check students' understanding about the material, teacher asked the students to do the quiz in the form of game. The game was a word search that the students should find the words indicated the signal words of cause and effect. To do this game, the students should use their scanning skills to find the hidden horizontal, vertical and diagonal words. In this activity, the students were engaged as it can be seen by their excitement. It caused by this activity integrated the game with learning materials. It is associated with Taspinar, Schmidt, & Schuhbauer (2016) that gamification affects increasing learning enthusiasm and enjoyment in the form of theory-loaded material.

Based on the observation checklist 8 above, all students compete each other to find the right answer. It could be meant that they showed their enthusiasm, curiosity, interest, and a desire to complete the crossword puzzle it was included to emotional engagement. When students respond positively to their school class experience and their learning, they are said to be emotionally engaged. From their enthusiasm, it could lead to the behavioral and cognitive engagement. The way students competed each other to find the right answer, it could also be meant that they participate actively and will to solve this activity. This implies that the participation of students in learning can be seen by their actions in answering the question, and their willingness to engage the needed effort to solve this activity by being focused (Fredricks et al. (2004).

The way BookWidgets facilitate the students' engagement using BookWidgets

Behavioral engagement

The implementation of BookWidgets can encourage the positive behavior of students. It can encourage them to keep attending the class, motivate them to submit the assignment on time, facilitate them to take a note on material, and promote them to keep listening and reading material. Based on the interview, the way BookWidgets encourage the positive behavior is by presenting the meaningful activities supported by the game and the online quiz. These widgets increased motivation and offered opportunities for students to learn in a meaningful context. The meaningful activities allow the students to involve in real-life which led to positive learning environment that encourages the students to learn. It lines with Okert (2018) that

technology allows students to involve in real-life and meaningful contexts, introduces different kinds of materials, and it has shown a positive impact on the motivation of learners of English as a foreign language.

Moreover, the implementation of BookWidgets can enhance the students' participation. It can engage them in the form of asking and answering question to teacher or students, and involving in discussion. Based on the interview, the students agree that the interesting feature of quiz and game of BookWidgets can encourage them to participate actively in the learning process. The interesting features offer an authentic and meaningful learning experience presented by audio-visual media (including video conferencing and presentation software) which make them be more participative on the course. It is supported by Amin & Sundari (2020) technology enhanced language learning has presented plentiful authentic material as well as an opportunity to practice language skills and be more participative on the course. This participation indicator supported by BookWidgets can change teacher-centered approaches towards learner-centered ones. BookWidgets provides more content and resources which help them to become more autonomous. It also provides an extensive variety of language context-learning opportunities and interactive activities most in a real context, such as online quiz and game. It is supported by Alsied & Pathan (2016) that technology has assisted in the switch from teacher-centered to learner-centered approaches.

Emotional engagement

The implementation of BookWidgets can maintain the students' emotion. The students feel happy and excited when using BookWidgets. It can be caused by the interesting and interactive feature such as Game of BookWidgets which make them feel happy, not bored and easy to understand the learning materials. Gamification affects increasing learning enthusiasm and enjoyment in the form of theory-loaded material (Taspinar et al., 2016). Moreover, BookWidgets has more opportunities for language learning than conventional methods. As a result, teachers has various resources and materials at their hands that can be implemented in their classrooms which can stimulate positive attitudes, for example, an increased level of interest, motivation, interaction, and language production,

and students can feel happy. Based on the interview, the students feel happy, enjoy, like, and interested when using BookWidgets. This can be facilitated by the interactive and easy feature of game and quiz which make them more understand the material. Each widget is linked to a URL that is sent to the students. Students will begin working on the activity as soon as they receive the link. It makes no difference what device they choose since the link is browser-based and can be accessed from any device connected to the Internet. The implementation of BookWidgets can maintain the students and teacher relation. BookWidgets can facilitate the communication between students and teacher. BookWidgets allows teacher to conduct student presentations, question and answer sessions, group assignments, and in-class problem-solving which can also facilitate collaboration. By this activity, the students are encouraged to become more than passive learners. It is caused by technology can also facilitate collaboration; one of the most significant benefits that educational technology offers is the simplicity with which students can collaborate and create (Perdue, 2016).

Cognitive engagement

The implementation of BookWidgets can help the students in solving their problem in learning English. BookWidgets improves the educational setting, and students can handle their learning so that the focus in the school shifts to the learner. It caused by BookWidgets can provide an authentic and meaningful learning experience. It is supported by Amin & Sundari (2020) that technology-enhanced language learning has presented plentiful authentic material as well as an opportunity to practice language skills and be more participative on the course. The audio-visual media in BookWidgets provides an accurate and meaningful environment and fosters a sense of community. It assists in various inclusionary approaches such as developing a sense of belonging, learners taking control of their learning, collaborative/ cooperative learning, and problem solving (Francis, 2017). It is helped by the feature of test-review and game itself. For example, Split Worksheet, on the same tab, teachers generate text and accompanying questions. The text is on the right side of the screen, while the comprehension questions are on the left. By this feature the students could read the text and answer questions in other proficiency exams. Moreover, the

Game of Cross Word, it is a game that optimizes learners' thinking skills. The teacher can develop crossword puzzles for individual learners or for learners to solve in groups. Kapp, Blaire, and Mesch (2013, cited in Menon, 2019) stated that gamification uses game-based mechanics, graphics, and game thinking to attract users, motivate action, encourage learning, and solve problems.

BookWidgets facilitate the engagement of students in terms of self-regulation. Students use their own learning strategy in following the learning activities. BookWidgets can be used to support reading, speaking, writing, and listening skills. Amin & Sundari (2020) agree that multimedia can assist students to be more independent in their learning. The interactive learning resources in BookWidgets provide learners with many opportunities to become autonomous learners. The widgets shared by teacher to Google Classroom can be accessed anytime so that the students can learn the material by themselves. It also in line with Faoziah, Jubaedah, Kodir, & Syarifah (2020) that technology offers more content and resources while still allowing students to become more independent. Moreover, using technology can boost student self-regulation and self-efficacy (Alioon & Delialioğlu, 2019).

The most dominant types of students' engagement in synchronous learning using BookWidgets

The 29 respondents had answered the 23 questions regarding the students' engagement aspects. The responses to the questionnaire were calculated through a statistical computation. Each response of the statements in the questionnaire had a scale value based on the Likert scale that was Strongly Agree with 4, Agree with 3, Disagree with 2, and Strongly Disagree with 1.

The highest score reflected the most dominant type of students' engagement in synchronous class using BookWidgets. Based on the survey result, the score for students' behavior engagement was 78%. Meanwhile, the score for emotional engagement was 76%, and the score for cognitive engagement was 75%. It means that behavior engagement was the most dominant type of students' engagement, which covered positive conduct, active involvement, and participation in the learning process. The results below were arranged based on the most dominant to less dominant types of students' engagement that appeared during synchronous learning using BookWidgets as interactive web-based media.

Table 1. *The questionnaire result on types of student engagement in BookWidgets - facilitated English class*

No	Types of Engagement	Aspects	Items	Item No.	\bar{x}	$\sum x$	Interpretation		
1.	Behavior Engagement (78%)	Positive Conduct	Class attendance	1	77%	79%	Very High		
			Task submission punctuality	2	72%				
			Take a note	3	82%				
			Listen and read material	4	84%				
		Work Involvement	Students' effort	5	89%	78%	Very High		
			Better concentration	6	74%				
			Task accomplishment	7	72%				
		Participant	Asking for information to other peers and teacher	8	84%	75%	Very High		
			Discussion involvement	9	66%				
		2.	Emotional Engagement (76%)	Positive Emotional & General feeling	Enjoyment in using BookWidgets	10	72%	73%	High
					English learning becomes easier	11	73%		
				Students Teacher Relation	Better communication with peers and teacher	12	74%	74%	High
				Values	Positive perception on the utility of BookWidgets for future	13	85%	85%	Very High
				Orientation	Achievement Satisfactory	14	71%	71%	High

		Toward Class					
3.	Flexing Problem Solving	Various learning strategy	15	72%	72%	High	
		Resilience towards problems in learning English	16	71%			
	Goal	Better able in understanding English material	17	72%	77%	Very High	
		Trying complete the task	18	84%			
		Gaining good score	19	73%			
	Cognitive Engagement (75%)	Quality of Instruction	The learning instruction is clear	20	75%	75%	Very High
		Self-Regulation and Learning Strategy	More planning in learning	21	69%	78%	Very High
			Connecting knowledge with the materials	22	78%		
			Asking peers and teacher to overcome problems encountered while learning English	23	87%		

Behavior engagement had a total score of 78%. It was formed from several aspects that are positive conduct (79%), work involvement (78%), and participation (75%), of which all aspects were categorized as very high engagement. It means that based on the survey, most of the students never skipped the class, their motivation in submitting the assignment on time was high, they also listen, read, and make a note on the material during the learning process. In terms of work involvement, the results indicated that the students had the willingness to do the task, tried harder to complete it effectively, and had a better concentration while doing it. Moreover, the students had high participation during the learning process in Zoom Meeting in the form of asking and answering the teacher or students questions.

Based on the result, overall, the students were very highly engaged (76%) in terms of emotional engagement. The emotional engagement was constructed by positive emotion and general feeling (73%), student-teacher relation (74%), orientation toward class (71%) which were categorized as high engagement, and values (85%) which were categorized as very high engagement. This result showed that most of the students felt happy, excited, and understood the material while utilizing BookWidgets. They were able to maintain their communication when they had to conduct distance learning. It was supported by the activities of student presentations, question and answer sessions, and group assignments. Moreover, most of the students agreed that BookWidgets had a big impact on their process and success in learning English. It could be seen by the result that represented the

students were highly satisfied with the results they get in English class while BookWidgets was used.

The cognitive engagement had a total score of 75%. It was composed of four aspects that are flexible problem solving (72%), which was categorized as high, goal (77%), quality of instruction goal (75%), and self-regulation and learning strategy (78%), which were categorized as very high engagement. The result reflected that the students' ability to solve problems in learning is high when they utilized BookWidgets in their learning. This ability was supported by their excellent learning strategies applied during the learning process and their effort in completing the tasks given by the teacher. The strategies consisted of preparing planning in learning, connecting existing knowledge with materials, and asking peers and teacher to overcome problems encountered while learning English. In short, overall, the students were very highly engaged in terms of cognitive engagement.

CONCLUSION

Regarding the implementation of BookWidgets as interactive web-based media in fostering students' engagement during synchronous learning, this study found the students were engaged behaviorally, emotionally, and cognitively. They presented positive behaviors, involvement, effort, positive emotion, achievement, and good self-regulation during their learning in the synchronous classroom using BookWidgets as the interactive web-based media. The use of BookWidgets has facilitated the students' engagement in synchronous learning in several ways. The interesting features has created

meaningful learning for students in terms of positive behavior, verbal participation, students' feeling and students' academic investment. The different interesting widgets and the easy use features provided by BookWidgets made students enthusiastic and reduced the boredom which made them motivate and engage in following the instruction during synchronous learning. Based on the statistical data, BookWidgets facilitated behavioral engagement with 78%, emotional engagement with 76%, and cognitive engagement with 75%. From this result it could be seen that two or more types of engagement were possible to occur at the same time. However, the level of each engagement type can be different, it was seen that BookWidgets mostly facilitated the behavioral engagement.

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