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Designing Worksheet Utilizing Minecraft in Guiding the Students to Arrange Recount Text

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ABSTRACT

Recount texts present a notable challenge for many junior high school students learning English, as students often encounter difficulties in comprehending the complexities of this specific type of writing. This research aims to develop steps in designing worksheets assisted by Minecraft to guide students in composing recount texts. Consequently, this study seeks to provide a structured approach to utilizing the educational potential of Minecraft in the learning process of recount writing. This research and development adapted from Dick and Carey's framework and the 6D framework of developing gamified systems by Werbach and Hunter. The result of the research showed that the worksheet utilizing Minecraft was strongly valid or could be used without revision, and the score was 91,66%. The researcher suggested the steps in designing the worksheet utilizing Minecraft to guide the students in English writing.

Keywords: worksheet, recount text, minecraft, writing

INTRODUCTION

Based on the regulation issued by the Minister of Education, Culture, Research and Technology regulation number 5-chapter 7 point (g) in 2022 about the Graduate Competency Standard, Junior High School students in Indonesia are expected to show literacy skills and passion in the form of interpreting and integrating text, to create simple inference, convey the response of information, and be able to write their experiences and feelings in the simple concept. It means that the students were not only expected to be able to understand and analyze the information in the text but also to write a text based on the learning experiences and ideas. Moreover, writing is an important student competence, but in fact, many students still do not have writing skills (Murniatie & Busri, 2021). The students sometimes had to work hard when writing past memories because they lacked grammar mastery, knowledge, and understanding of the text, experience, and educational background (Sartika et al., 2022). Also, students' difficulties in writing were related to content, organization, vocabulary, and sentence structure (Mustika et al., 2020).

Therefore, teachers cannot only transmit knowledge to the students, but they also need to attract the students to build their knowledge in their minds (Bada & Olusegum, 2015). Teachers need to prepare instructional material to guide the students in building their knowledge and skills. The worksheet is a tangible resource that supports the teaching and learning process. It includes a series of tasks that the students need to do to optimize their core skills based on the indicators of learning outcomes achievement that must be taken (Zulyadaini, 2020). Moreover, the student's worksheet is needed to guide and direct learning observation activity systematically so that it trains students' scientific skills and is conditioned to the current curriculum development to achieve the learning goals (Aprilanti et al., 2019).

On the other hand, today, most young learners perceive that learning English will

be interesting by including games in the process. The majority of young learners prefer to use games to teach English in the classroom if they were English teachers (Ekin & Damar, 2013). There is an innovative teaching strategy for using digital games in an educational setting or as a learning tool called gamification (Ling, 2018). Meanwhile, Kapp (in An, 2020) defined gamification as engaging and motivating people to do something, promoting learning, and solving problems using game mechanics, aesthetics, and game thinking. Gamification emerged in mobile applications to encourage students to participate in classroom activities and support particular behaviors (Redjeki & Muhajir, 2021). Gamification offers students several advantages, including enhanced motivation, cultivation of a positive attitude, improvement in academic performance, development of 21st-century skills, enhancement of cognitive achievements, stimulation of social interaction and independence, and elevation of competitiveness among students during the learning process (Rahmani, 2020).

Furthermore, one of the ways to introduce gamification in the classroom safely, and the teachers could control it, was Minecraft (Park, 2018). By using Minecraft in learning sciences, math, social sciences, language, arts, and composition classes, students can acquire knowledge and skills, and they are also engaged, interested, and enthusiastic (Baek et al., 2020). Moreover, the students can improve their vocabulary acquisition more easily by watching the less frequently used words from Minecraft video tutorials and playing the games (Chien, 2019).

In addition, teachers can create more interesting and interactive classes by including games in the worksheets (Hanifah & Putri, 2020). Besides, assessment tools should be determined to evaluate the student's achievement in learning by using a worksheet and giving a title to the worksheet based on the theme. Trinanda et al. (2018), in the study entitled "Validity of Students Worksheet Problem-Based Learning Equipped with Crossword Puzzles on Ecosystem and Environmental Changes for Senior High School," found that students worksheets based on problem-based learning equipped with crossword puzzles has been effective improving on affective competence and highly effective on psychomotor domain in the ecosystems material and environmental changes for class X SMAN 5 Bukit tinggi can be categorized valid, practical and effective. It means that using worksheets with a game has improved students' psychomotor competence.

Besides, there were some studies about teaching recount text by using games. Firstly, Shopiah and Anggraeni (2018), in the study titled "Teaching Recount Text through Scrabble Game," stated that many grade VIII students still found difficulties in putting their ideas following the generic structures of recount text since the students lacked the vocabulary to do the learning activity. The researchers decided to use the Scrabble game to improve the students' skills in writing recount text. They argued that teaching techniques using the game attracted the students' interest in the teaching and learning process because it reduced students' boredom, made classroom situations more accurate, and made it easier for the students to arrange and recount text. Meanwhile, Utomo (2021), in the study entitled "Teaching Writing of Recount Text Using "Freeze! Freeze!" Game in Junior High School Level" stated that one of the problems in learning writing faced by the grade VIII students was the students' lack of ideas to compose sentences into a paragraph. In contrast, it was an important process to arrange recount text, so he decided to teach writing recount text through a game. He also stated that games could help and encourage students to sustain their interest and performance.

By considering the previous studies, the authors argued that the current studies presented a thorough but novel analysis of developing the worksheet utilizing games and improving the students' competence in writing recount text. The novelty of this

study lies in the interpretation raised to the issues of designing worksheets utilizing digital games for guiding the students to arrange recount text. Based on the given background, this study intended to address the research question: "How to design worksheet utilizing Minecraft to guide the students to arrange recount text?"

MATERIALS & METHODS

This study was research and development to design a worksheet utilizing Minecraft to guide the students in arranging recount text. The research and development method was considered to be the appropriate means for this study since, following the research purpose, the authors focused on the steps that must be done to design worksheets utilizing Minecraft. Therefore, by adapting Dick et al. (2001) steps of the system approach model of research and development and the 6D framework of developing the gamified system by Werbach et al. (2012), for gamifying the instruction, the authors proposed the steps of designing worksheet utilizing Minecraft. The steps were needed assessment, reviewing curriculum document, describing the learner's characteristics, formulating the learning objectives, developing assessment instrument, developing and selecting the instructional material, gamifying the learning activities by including Minecraft game, designing the worksheet utilizing Minecraft and validating it, field testing, and revise.

Instruments used to measure the worksheet utilizing Minecraft were pre-test, post-test, questionnaires, journal notes, and interview transcripts. The pre-test and post-test were used to measure the students' competencies in arranging recount text by using the worksheet. In addition, the researcher used mixed-method data analysis techniques to measure the validity of the prototype in the form of a worksheet utilizing Minecraft. The qualitative data were taken from the notes of the observation journal during the field testing and the interview. The quantitative data were the result of the questionnaire and test validity that were analyzed by using the Likert Scale in the form of a numerical rating scale and alternative answers.

Therefore, the authors saw the validity of the questionnaires by using the following formulas and the validity criterion category adapted from Akbar (2013).

$$V = \frac{Va_1 + Va_2 + Va_3}{3}$$

Note:

- V : combined validity calculation
- Va_1 : Validity from expert judgement media
- Va_2 : Validity from expert judgement material
- Va_3 : Validity from limited empirical test question

Table 1. Validity Criterion Category of the Prototype based on Akbar (2013)

Validity Criterion	Category
85,01% -100%	Strongly valid or can be used without revision
70,01% -85%	Quite valid or can be used but need a little revision
50,01% -70%	Less valid, suggested not to be used because need many revision
01,00% -50%	Not valid or cannot be used

Meanwhile, to see the validity of the pre-test and post-test, the researcher used One-Sample T-test. Also, the researcher used the normality test of Kolmogorof Smirnov to see the normal distribution of the data. Based on the normality test, the significance level (α) = 0,05 or 5 %, and the critical region was 0,43001. The D max was 0,2886. The criteria used in the normality test were the null hypothesis (Ho) was accepted if D max < 0.05 or 0,43001, and the null hypothesis (Ho) was rejected if D max > 0.05 or 0,43001.

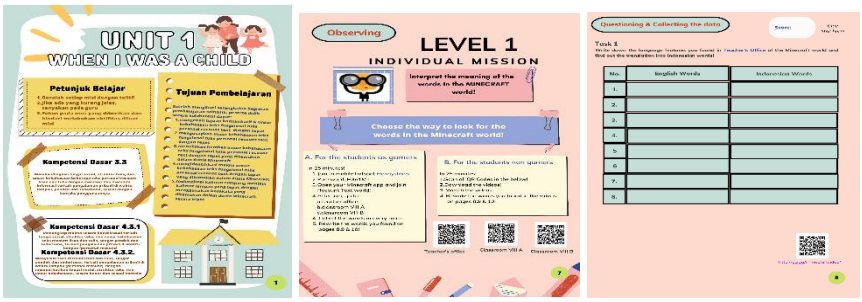
RESULT

The worksheet designs utilizing Minecraft by following the developed learning steps were divided into three stages. The learning steps

were gamified learning activities by following a scientific learning approach.

In the prewriting stage, the researcher decided to put the preliminary pages first to inform the students about what they would learn and do. Therefore, the worksheet layout of the prewriting stages presented into preliminary pages, observing instruction pages to explore Minecraft world, and questioning & collecting the data pages.

The layouts of prewriting stage can be seen as follow.



(a) (b) (c)

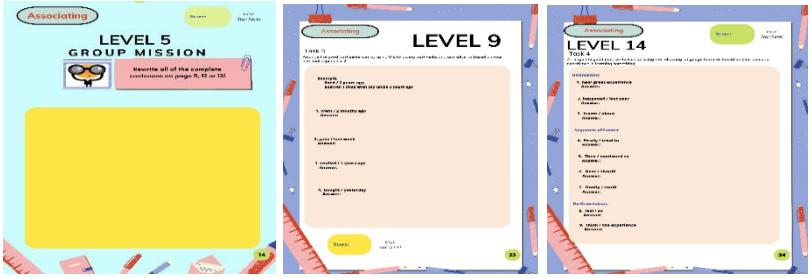
Figure 1. The prewriting stage includes: (a) preliminary page, (b) observation instruction page, (c) questioning and collecting the data page.

In addition, by following the observation page, the students could see the Minecraft world built where some language features needed to be collected for the next learning activities. There was a school building in Minecraft World with some rooms. Also, below is the Minecraft world layout that supports the gamified learning activities in the worksheet.

(a) (b)

Figure 2. The layout examples of building in the Minecraft world includes: (a) the school building, (b) school canteen.

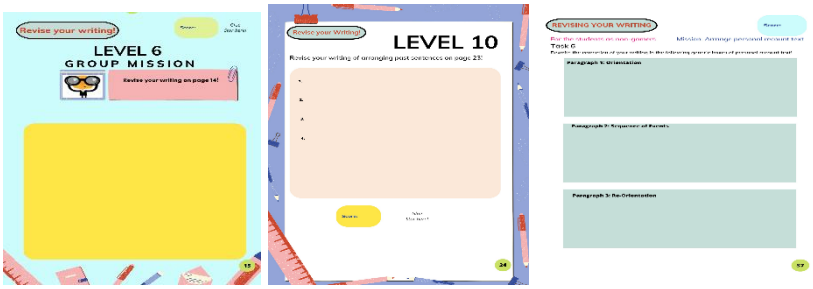
In the writing stage, the researcher decided to put the writing activities in each unit were different. In Unit 1, the writing activities were rewriting the complete sentences in the previous learning activities. In Unit 2, the writing activities were arranging jumbled words into good past sentences and arranging past sentences. In Unit 3, the writing activities were arranging past sentences and arranging past sentences into paragraphs of recount text. The layouts of writing stage can be seen as follow.



(a) (b) (c)

Figure 3. The writing stage for: (a) unit 1, (b) unit 2, (c) unit 3

In the post-writing stage, the researcher designed pages to revise the students' writing. The students revised their writings based on the correction of their grammatical or spelling and punctuation mistakes in the writing activities. The layouts of the writing stage can be seen as follows.



(a) (b) (c)

Figure 4. The post-writing stage for: (a) unit 1, (b) unit 2, (c) unit 3

Findings of expert judgement of media in assessing the worksheet utilizing Minecraft as follow.

Table 2. The Result of Expert Judgement of Media

Aspects	**Ts_e**	**Ts_h**	**Va_1**
Media selection	44	48	92 %
Appearance and physical attributes	11	12	92 %
The use	27	28	96.%
The integration	7	8	88 %
The evaluation	23	24	96 %
Average	112	120	93%

Hence, the findings of expert judgement of material in assessing the worksheet as follow.

Table 3. The Result of Expert Judgement of Material

Aspects	**Indicators**	**Ts_e**	**Ts_h**	**Va_2**
General Attributes	In relation to syllabus and curriculum	8	8	100%
	Methodology	8	8	100%
	Suitability to learners	11	12	92%
	Physical and utilitarian attributes	15	16	94%
Content	General	14	16	88%
	Listening	3	4	75%
	Speaking	3	4	75%
	Reading	3	4	75%
	Writing	16	16	100%
	Vocabulary	8	8	100%
	Grammar	6	8	75%
	Exercises	16	16	100%
Total		**111**	**117**	
Average				**89%**

By looking at the validity result from the experts, it could be seen that the validity of media (Va_1) was 93% and the validity of material (Va_2) was 89%. Based on the validity criterion of the data adopted from Akbar (2013), the worksheet was valid or could be used without revision.

Furthermore, the findings of limited empirical test could be seen as follow.

Table 4. The Result of Limited Empirical Test for the Students

Aspect	**Indicators**	**Result**	
		Percentage (%)	**Average (%)**
Construction	The accuracy of language use and the sentences	94	
	Consider to the students' ability	89	
	Having benefit, purpose, and identity	93	92
Technical	Accuracy of the writing use	100	
	Accuracy of the picture use	86	97

	Accuracy of colour use	100	
	The attractiveness of media	100	
Layout	Technique of material layout	85	85
Content	The completeness of the material	99	
	Attractiveness for the students' learning motivation	94	96
Total score (Ts_e)		940	370
Maximum score (Ts_h)		1000	400
Validity from limited empirical test question (Va_3)		93	93

Based on Table 4, it could be concluded that the result of the limited empirical test for the students was 93%. It meant that the worksheet utilizing Minecraft was strongly valid or could be used without revision. After getting the data of the expert judgements from the media and material experts and the students' perception of the use of worksheets utilizing Minecraft, the authors saw the validity of the worksheet by combining the data results to know the average. The findings of the validity can be seen below.

$$V = \frac{93\% + 89\% + 93\%}{3} = 91{,}66\%$$

It could be concluded that the result of the combined validity calculation was 91,66%. Based on validity criterion (Akbar, 2013), it was categorized as strongly valid and could be used without revision. It meant that the worksheet utilizing Minecraft was very valid in guiding the student to arrange recount text. Besides, based on the t-test result, the t-value was 1,9164. The passing grade of the students' competence in arranging recount text was 60. Meanwhile, the table was 1,860. Therefore, the null hypothesis was rejected because the t-value was more than the t-table. It could be concluded that the average of the students' competence was more than 60, and the worksheet successfully improved the students' competence in guiding them to arrange recount text.

On the other hand, based on the observation journal, the authors found that all the students were engaged in the learning process. In addition, based on the interview with the students after field testing, the students said that the gamified learning activities using the Minecraft worksheet helped them understand and arrange past sentences and paragraphs of recount text.

DISCUSSION

The study's findings confirmed the previous studies' result that the worksheet utilizing games captured the students' attention during the teaching and learning process, improved the students' psychomotor competence, made the colourful and interactive classroom atmosphere, and facilitated the students organizing recount texts more efficiently. Based on the result of the combined validity calculation and the validity criterion, the worksheet utilizing Minecraft was strongly valid and could be used without revision. Meanwhile, based on the validity test of the students' competence in arranging recount text, the alternative hypothesis was accepted, and the null hypothesis was rejected. The alternative hypothesis showed that the average ability of the students in arranging recount text was more than the score of the minimum passing grade.

In addition, the learning activities of the worksheet utilizing Minecraft not only tried to guide the students in arranging recount text but also supported 21st-century skills and the differentiated learning process. By finding the language features inside the Minecraft world and then using the language to do the learning tasks in the worksheet, the students have practiced their competences of thinking critically, communicating their ideas in written, using technology tools for good purpose wisely, doing information literacy and self-learning. Meanwhile, by discussing how to finish the group mission, the students have practised their competencies of collaborating and communicating with their friends. Hence, the worksheet utilizing Minecraft supported the differentiated learning process. Though the

learning activities were gamified and connected to the worksheet and Minecraft world, there were two ways to look for the language features in Minecraft world. The first way was by joining the Minecraft world built by the English teacher through the Minecraft game application of the students' Smartphones. Another way was by watching exploration videos of the Minecraft world. It was differentiated learning of process.

CONCLUSION

The result of this study involved the learning steps in designing the worksheet utilizing Minecraft in guiding the students to arrange recount text. The gamified learning activities of the worksheet were used to guide the students through the writing process, namely pre-writing stage, writing stage and post-writing stage. The research was expected to be developed, and further testing for the students was carried out.

Declaration by Authors

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