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The Development of PowerPoint Animated-Based Interactive Media to Improve English Reading Skills for Vocational High School Students

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Abstract: Media is a crucial and inseparable part of the learning process, especially to achieve learning objectives. In this study, the model used in the development of interactive learning multimedia was the Borg & Gall model. The research and development stages of the Borg & Gall model consist of ten steps: (a) research and data collection, (b) planning, (c) initial product development, (d) initial product trial/limited trial, (e) improvement of the initial product, (f) more comprehensive field trial, (g) improvement of the product resulting from a broader field test, (h) final product trial, (i) revision or refinement of the final product, and (j) dissemination and implementation. The development process involved subject matter, learning design, and learning media experts to provide feedback and suggestions for improvement. In addition, the English subject teacher of self-introduction material as a user of PowerPoint animation based-interactive media also offered feedback and input. The development research results revealed that this PowerPoint animation-based interactive media product had a material feasibility level of 70.66%, a learning design feasibility of 91.42%, and a learning media feasibility of 91.42%. In comparison, the small group trial rate was 81.11%, and based on field trials, 84.46% indicated very decent qualifications and did not need to be revised.

Keywords: Materials development, interactive media, PowerPoint animation, English reading skills

Abstrak: *Media adalah bagian yang sangat penting dan tidak terpisahkan dari proses pembelajaran, terutama untuk mencapai tujuan pembelajaran. Model pengembangan yang digunakan dalam pengembangan multimedia pembelajaran interaktif ini adalah model Borg & Gall. Tahapan penelitian pengembangan pada model Borg & Gall terdiri atas sepuluh langkah yaitu: yaitu: (a) penelitian dan pengumpulan data, (b) perencanaan, (c) pengembangan produk awal, (d) uji coba produk awal/uji coba terbatas, (e) penyempurnaan produk awal, (f) uji coba lapangan lebih luas, (g) penyempurnaan produk hasil uji lapangan lebih luas, (h) uji coba produk akhir, (i) revisi atau penyempurnaan produk akhir, (j) Diseminasi dan implementasi. Proses pengembangan melibatkan ahli isi mata pelajaran, ahli desain pembelajaran dan ahli media pembelajaran untuk memberikan tanggapan dan masukan perbaikan. Selain itu guru mata pelajaran Bahasa Inggris Materi Self Introduction sebagai pengguna Media Interaktif Berbasis Animasi PowerPoint ini juga memberikan tanggapan dan masukannya. Hasil penelitian pengembangan ini adalah Produk Media Interaktif Berbasis Animasi PowerPoint ini memiliki tingkat kelayakan materi 70,66%, kelayakan desain pembelajaran 91.42%, dan kelayakan media pembelajaran 91.42% Sedangkan tingkat uji coba kelompok kecil adalah 81.11% dan berdasarkan uji coba lapangan 84,46% dengan kualifikasi sangat layak*

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Kata Kunci: *pengembangan materi, media interaktif, animasi power point, keterampilan membaca bahasa Inggris*

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INTRODUCTION

In recent years, there has been a paradigm shift in learning. Knowledge cannot simply be transferred by educators into the minds of students, but the knowledge is constructed in the minds of students themselves. Educators are also not the only source of learning for students (teacher-centered), but it is more desirable that learning is student-centered (Gu, 2021; Morel, 2021; Wong, 2021). One of the learning resources known is teaching materials. Teaching materials are learning components that need attention. It is because teaching materials can provide convenience for students to construct and understand essential concepts as outlined in learning materials.

At this time, educators are also expected to develop skills to make their learning media. It is because media is a vital and inseparable part of the learning process, especially to achieve learning goals (Bernadeta Ritawati & Wahyuni, 2020; Roisa, 2020; Suhartatik & Pusparini, 2020). The media significantly contribute to the success of the learning process in schools. In this case, interactive media based on the Microsoft PowerPoint animation program will give meaning to the knowledge gained by students, and learning can be student-centered (Atik, 2019; Kodariyah & Pasaribu, Y. P., & Asmaningrum, 2017; Nuryanti et al., 2019).

However, the fact revealed by the researchers often found educators who rarely designed their learning tools. Educators also preferred to adapt from previous educators or take from the internet. The use of learning tools of earlier educators, from the internet, books, or any media, may be permitted, but as long as it is used as a reference and continues to be developed in accordance with the times and analysis of the students' intrinsic and extrinsic aspects.

In addition, the impact of learning not using learning media in the form of PowerPoint animation-based interactive media is that students have difficulty understanding the subject matter (Atik, 2019; Hermawan et al., 2020; Muktisari et al., 2017). In fact, learning using media is vital to do. With learning media, educators can be helped to convey things that educators cannot bring in class, such as due to too small or too large learning objects or new information and knowledge previously never obtained by educators, as science is constantly evolving. Therefore, the more active the involvement of students using interactive media based on PowerPoint animation (Hermawan et al., 2020; Muktisari et al., 2017; Suhartatik & Pusparini, 2020), the concentration of students' learning and attention to subject matter can be increased easily. These learning media can also help students more easily understand the subject matter and improve their reading skills.

Moreover, the current actual condition uncovered that no PowerPoint animation-based interactive media was suitable for teaching English reading skills. Thus, the ideal situation to achieve these competencies in learning English requires PowerPoint animation-based interactive media. Hopefully, this media will increase learning motivation and outcomes of English students regarding reading skills. This PowerPoint animation-based interactive learning media can also be used by students both in groups and individually according to their abilities. For students with more capabilities, they can learn quickly; conversely, for less capable students, they can learn repeatedly. Students can also deepen their knowledge.

METHOD

This research on developing PowerPoint animation-based interactive media to improve student's reading skills in English subjects of self-introduction material was carried out starting in February 2022. This research was conducted at SMKN 1 Slahung. The trial subjects in the development of this learning package consisted of (a) subject experts, comprising one content expert in the field of study, one learning media expert and learning design, (b) individual trial involving three students, (c) the small group trial including nine students, and (d) the field trial consisting of 21 students and one English teacher.

Qualitative descriptive data analysis techniques were employed to process data collected from product reviews and trial results. Qualitative analysis techniques were also used to process data from interviews and discussions with experts and the results of individual and small group trial questionnaires. In addition, qualitative descriptive analysis was carried out by classifying information in the form of input, criticism, and suggestions for improvement contained in the questionnaire. The results of this analysis were then used as the basis for revising the product.

Then, data obtained from expert test questionnaires, individual tests, and small group tests were processed utilizing statistical analysis techniques as percentage descriptive. The formula used to calculate the percentage of each expert test subject and the individual test is as follows:

$$\text{Persentase} = \frac{F}{N} \times 100$$

Figure 1. Research Development Test Formula

F: The frequency of subjects choosing the alternative

N: The total number of test subjects

To give meaning and make decisions in revising the product, a level qualification with the following criteria was used:

Table 1. Rating Scale

Rating Scale	Classification	Description
81%-100%	Very Good	No Need to Revise
66%-80%	Good	No Need to Revise
56%-65%	Not Good	Needs Revision
0%-55%	Very Not Good	Needs Revision

In this study, the researchers used the Borg & Gall Model because it was suitable for use in this development. The type of research carried out was developed using the Borg & Gall Model learning media development procedure: (a) research and data collection, (b) planning, (c) initial product development, (d) initial product trial/limited trial, (e) initial product improvement, (f) more comprehensive field trial, (g) broader field test product improvement, (h) final product trial, (i) final product revision or improvement, and (j) dissemination and implementation.

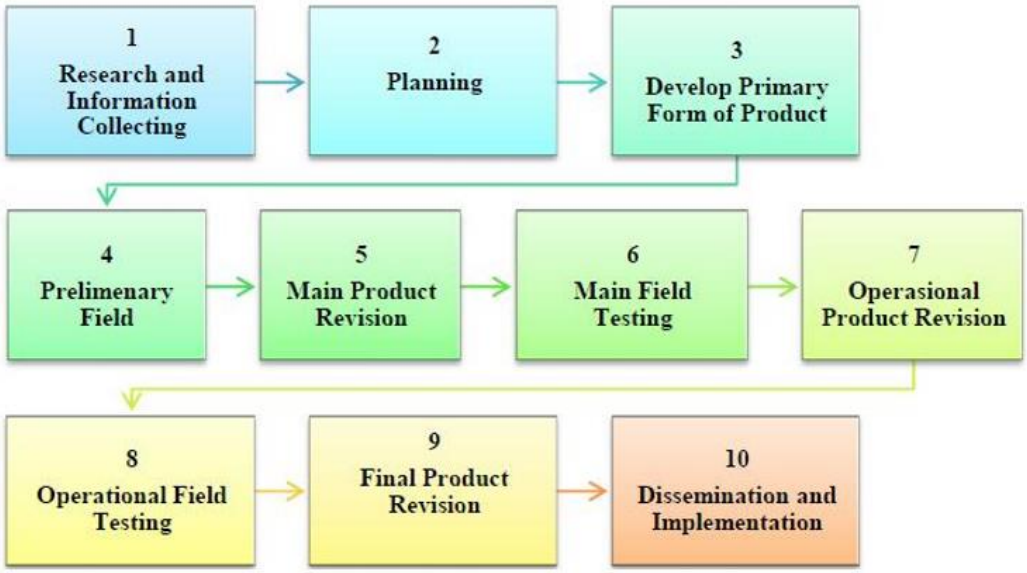

Figure 2. Research Steps of Model Borg & Gall

RESULTS AND DISCUSSION

Data and data analysis are presented in this chapter in succession, starting from the review results of the content, design, and media experts, individual trial, small group trials, field trials, and peer tests. The data obtained from the results of this feasibility assessment were presented for analysis based on the assessment formula. Based on this analysis, the learning content's shortcomings or inadequacy, the learning design's feasibility, and the media feasibility that the authors prepared could be known. The next step was to revise or improve what the assessors suggested so that this product was suitable for reading skills in self-introduction subjects for class X department of TBSM SMKN 1 Slahung by English teachers. Thus, this product can be helpful for students at the school.

The content expert's questionnaire data for students' PowerPoint animation-based interactive media product revision can be seen in Table 2.

Table 2. Learning Content Expert Data

No	Indicator	Score
1	Level of the relevance of textbooks with curriculum	5
2	The accuracy of the title of the unit with the description of the material in each unit	4
3	Clarity of introduction on each theme	4
4	Clarity of content outline (epitome)	5
5	Appropriateness of indicators and basic competencies	4
6	Conformity of indicators with material description	5
7	Conformity between basic competencies, indicators, and material description	5
8	Clarity of description	5
9	The suitability of the examples presented with learning materials	4
10	Clarity of completion of sample questions on the sidelines of material description	5
11	Clarity of content summary	4
12	Conformity between competency test and indicator	5
13	Interesting components in textbooks	5
14	Interesting learning content	4

15	The attractiveness of organizing PowerPoint animation-based interactive media using the Borg & Gall model	4
	Total	68

Based on Table 2, the learning content feasibility scoring analysis had 15 aspects of assessment: the formulation of learning content, formulation of learning objectives, selection, and organization of teaching materials, selection of teaching materials, selection of learning resources, and organization of assessment tools as outlined in the questionnaire. The score obtained from the questionnaire was 68, or the eligibility percentage was 90.67%. Thus, the feasibility of content experts for PowerPoint animation-based interactive media for class X students of TBSM SMKN 1 Slahung indicated that it was very suitable for students to use in learning.

Then, the design expert's questionnaire data for the revision of student PowerPoint animation-based interactive media products can be seen in Table 3.

Table 3. Analysis of Learning Design Assessment

No	Indicator	Score
1	Binding quality	5
2	The attractiveness of the cover design	4
3	The accuracy of the typing layout	5
4	Consistent use of title space, sub, and typing material	4
5	Clarity of writing/typing	5
6	Completeness of the components in each chapter of the textbook	5
7	Accuracy of presentation of material	5
	Total	33

Based on Table 3, the feasibility scoring analysis of learning design had seven aspects of assessment: formulation, formulation of learning objectives, organization of teaching materials, design of learning scenarios, design of learning resources, and design of assessment tools. The score obtained from the questionnaire was 33, and the eligibility percentage was 94.29%. Therefore, the feasibility of design experts for PowerPoint animation-based interactive media for class X students of TBSM SMKN 1 Slahung denoted that it was very suitable for students.

The media expert's questionnaire data for the revision of students' PowerPoint animation-based interactive media products can be seen in Table 4.

Table 4. Analysis of Learning Media Assessment

No	Indicator	Score
1	Accuracy of illustrations used in textbook covers	4
2	The suitability of the material with the media used	4
3	Quality of paper used	4
4	Font size accuracy	5
5	Image placement accuracy	5
6	Text quality	4
7	Organizing the design of learning messages	5
	Total	31

Based on Table 4, the learning content feasibility scoring analysis had seven assessment aspects: the formulation of learning content, formulation of learning objectives, selection, and organization of teaching materials, selection of teaching materials, selection of learning resources, and organization of assessment tools as outlined in the questionnaire. The score obtained from the questionnaire was 31, or the eligibility percentage was 88.57%. Thus, the feasibility of media experts on PowerPoint animation-based interactive media for class X students of TBSM SMKN 1 Slahung signified that it was very suitable for students to use in learning.

The data were taken from class X TBSM department of SMKN 1 Slahung, using a questionnaire from three selected students. This trial data served to test the quality of the material learning elements in the PowerPoint animation-based media interactive of students being developed and correct the deficiencies in this product.

Table 5. Analysis of Individual Trial Assessment

Aspect	Score of Respondent			Total	Percentages (%)
	1	2	3		
1	5	5	4	14	93%
2	5	5	5	15	100%
3	4	5	4	13	87%
4	4	5	5	14	93%
5	5	5	4	14	93%
6	5	4	5	14	93%
7	5	5	3	13	87%
8	5	5	4	14	93%
9	5	5	4	14	93%
10	4	4	5	13	87%
11	5	4	5	14	93%
12	4	5	5	14	93%
13	4	5	5	14	93%
14	4	5	4	13	87%
15	5	4	4	13	87%
16	5	5	4	14	93%
Total	74	76	70	220	92%

Based on Table 5, the student questionnaire results in learning content feasibility scoring analysis had 16 aspects of assessment: the formulation of learning content, formulation of learning objectives, selection, and organization of teaching materials, selection of teaching materials, selection of learning resources, and organization of assessment tools as outlined in questionnaire. The score obtained from the questionnaire could be seen in the percentage of eligibility of 92%. Hence, the feasibility of PowerPoint animation-based interactive media for class X students in the TBSM Department of SMKN 1 Slahung indicated that it was very suitable for students in learning.

The data were taken from class X TBSM Department of SMKN 1 Slahung, using a questionnaire from nine selected students. The trial data served to test the quality of the elements of learning materials in the interactive media based on student PowerPoint animations being developed and correct the deficiencies in this product.

Table 6. Student Questionnaire Results for Small Group Trials

Aspect	The Score of Respondents in Small Group									Total	Percentages (%)
	1	2	3	4	5	6	7	8	9		
1	4	5	4	5	4	4	4	5	5	40	88.89%
2	4	4	5	4	5	5	5	5	4	41	91.11%
3	4	5	4	4	5	4	5	5	5	41	91.11%
4	4	5	4	5	4	5	4	5	5	41	91.11%
5	4	5	4	5	4	5	5	4	4	40	88.89%
6	4	5	4	4	5	4	4	5	4	39	86.67%
7	5	4	5	5	5	4	5	4	5	42	93.33%
8	4	4	5	5	4	5	4	4	4	39	86.67%
9	4	5	4	5	5	5	5	5	4	42	93.33%
10	5	5	4	4	5	5	5	4	5	42	93.33%
11	5	4	5	4	5	4	5	5	5	42	93.33%
12	5	5	4	4	5	4	5	5	4	41	91.11%
15	5	4	4	4	5	5	4	5	4	40	88.89%
14	4	5	4	5	4	5	5	4	5	41	91.11%
15	4	4	4	5	4	4	5	4	5	39	86.67%
16	5	5	5	4	5	4	4	4	5	41	91.11%
Total	70	74	69	72	74	72	74	73	73	651	90.42%

Based on Table 6, the student questionnaire results in learning content feasibility scoring analysis had 16 aspects of assessment: the formulation of learning content, formulation of learning objectives, selection, and organization of teaching materials, selection of teaching materials, selection of learning resources, and organization of assessment tools as outlined in questionnaire. The score obtained from the questionnaire could be seen in the percentage of eligibility of 90.69%. Therefore, the feasibility of PowerPoint animation-based interactive media for class X students of TBSM SMKN 1 Slahung indicated that it was very suitable for students to use in learning.The data were taken from class X TBSM department of SMKN 1 Slahung, using a questionnaire from 21 selected students. The trial data served to test the quality of the material learning elements in the PowerPoint animation-based media interactive of students being developed and correct the deficiencies in this product. The student questionnaire results in learning content feasibility scoring analysis had 16 aspects of assessment: the formulation of learning content, formulation of learning objectives, selection, and organization of teaching materials, selection of teaching materials, selection of learning resources, and organization of assessment tools as outlined in questionnaire. The score obtained from the questionnaire could be seen in the percentage of eligibility of 91.61%. Thus, the feasibility of PowerPoint animation-based media interactive for class X students of TBSM SMKN 1 Slahung indicated that it was very feasible for students in learning.

The product trial for developing students' PowerPoint animation-based interactive media was carried out in class X of the TBSM department at SMKN 1 Slahung. The data obtained from peers in the same field of study, namely English (colleagues), were used to find weaknesses and product deficiencies so that further steps could be taken to improve this product.

Table 7. Peer Questionnaire Results

No	Indicator	Score
1	The accuracy of the illustrations used on the cover of the textbook	5
2	The suitability of the material with the media used	5
3	Quality of paper used	4
4	Font size accuracy	4

Total	18

Table 7 reveals the score of 18 from one respondent; when viewed, the eligibility percentage was 90%. These results indicated that PowerPoint animation-based media interactive for class X students of TBSM SMKN 1 Slahung could help students learn.

The product produced in this development was PowerPoint animation-based interactive media. This PowerPoint animation-based interactive media could be used with computers or laptops and Android-based mobile phones. The material contained in PowerPoint animation-based interactive media was equipped with video, audio, images, and links to help understand the material more easily. This media is also independent and interactive, which aims to make learning easier to access anywhere and anytime (Amer, 2020; Atmaja, 2021; Kunsa'aidah, 2021). Interactive media based on PowerPoint animation is a digital form module consisting of text, images, or both, containing digital electronic material accompanied by simulations that can and are suitable for learning.

According to Aryati (2021), Hikmah & Maskar (2020), and León & García-Martínez (2021), media comes from the medius language, which means intermediary. The media component itself can be in the form of software or hardware. Some also argue that media uses hardware comprising text, images, audio, and visuals or video by using tools and interaction relationships so that learning can run interactively.

Moreover, the lack of media utilization makes learning more boring for students. Paul & Seniuk Cicek (2021), Rangkuti (2021), and Yang et al. (2021) explained that the use of media itself has benefits in the learning process: (1) making it easier to deliver messages, (2) being mobile or being able to be carried everywhere, and (3) increasing learning motivation.

As Iga Raspati & Maria Zulfiati (2020), Liu et al. (2021), and Rosmiati & Siregar (2021) stated, each learning media has a different role in improving a good learning process. The role of learning media in learning activities is a substitute for the teacher but cannot completely replace its role. Learning media can also make the learning process more efficient and effective in achieving learning objectives; therefore, the function of learning media is vital, especially in the current era of rapidly developing technology. Besides, the existence of learning media can accelerate students' understanding. The teaching and learning process will also be optimal if it utilizes learning media effectively (A. Alghamdi, 2020; Suwaryaningrat, 2020; Virk et al., 2020).

Furthermore, smartphone users are now considered part of one's life. Children to adults depend on this technology for their lifestyle. Not a few smartphones are also used in education, while others only use them to make money or play games. Therefore, smartphones can be used mainly in education at the appropriate age. If it is used at a lower age, it is not uncommon for students still not to understand. Thus, it is recommended for students who have stepped on the SMA-SMK equivalent.

In this regard, PowerPoint animation based-interactive media is an innovation in learning, which allows the learning process to be more flexible (Ahnaf et al., 2021; Gordani & Khajavi, 2020; Wahyuni et al., 2020). There is also a growing understanding of the "potential phone" to support learning and changing cultural and social behavior (Kurniawan & Sumargono, 2021; Puspita et al., 2020; Salfitri & Guspatni, 2021).

The term PowerPoint animation-based interactive media includes personal, connected, and interactive use in and outside the classroom (Ikhsanty et al., 2021; Mardianto & Prayitno, 2020; Muhayati, 2020). In the context of learning, learning with device phones acts as a learning system, learning media, or source of learning material.

As a medium and learning resource, PowerPoint animation based-interactive media uses various paid and unpaid application programs that everyone, including students, can access. Notably, one of

the mobile operating system platforms that are easily accessible and have been widely developed in the development of learning media programs is an Android-based program. Cariveau et al. (2021), N. L. P. S. Dewi & Manuaba (2021), and Nasution & Aini (2021) explained that the use of PowerPoint animation-based interactive media is expected to facilitate and solve the problem of learning difficulties in students, not even adding to the problem due to the device's limitations to be used later. To develop a product to overcome learning problems, developers must look at the background, characteristics, and issues in the learning environment, so it is necessary to create a media to support learning objectives (Armelia Nungki Nurbani & Natalia Christina Sugiyanto, 2021; Chotimah & Manoy, 2021; Suwondo et al., 2021).

This developed research also has the advantage that it can be used in media such as personal computers or smartphones. It is described (M. D. Dewi & Izzati, 2020; Sakulin et al., 2021; Savitri & Zaman, 2021) that the tools used in learning, such as Android mobile-based applications, will facilitate the learning process, especially independently or not, depending on the teacher. It is because applications given the material on a smartphone can be carried everywhere. The material has also been summarized so that it does not like taking a printed book.

Anwar et al. (2020), Günhan & Köprülü (2021), and Putra (2021) suggested that the development of PowerPoint animation-based interactive media learning media must be made as attractive and interactive as possible to increase students' learning motivation. Here, the use of smartphones is the latest innovation in today's era. If not used wisely, smartphones also have a negative side, so there needs to be supervision from parents and teachers. Media is also a means to convey interesting messages to students in a learning process (Azizah & Anggaryani, 2021; Damitri & Adista, 2020; Zain & Pratiwi, 2021).

In addition, Dorji et al. (2021), Nur Aziz & Ani Setyo Dewi (2020), and Volf (2021) argued that the advantage of PowerPoint animation-based interactive media is as a means to knowledge and technology that focuses on speed, convenience, and attractiveness without compromising on the principles of learning. Therefore, it can be concluded that learning to use PowerPoint animation-based interactive media is without any pressure during learning within the learner.

As asserted (Alavi & Hirji, 2020; Astuti et al., 2020; Efendi et al., 2021), mobile learning or PowerPoint animation-based interactive media facilitates equal opportunities for everyone by enabling learning that can be accessed across time zones, to make locations and distances closer for students. PowerPoint animation-based interactive media can also be said to be a dynamic and systematic learning environment using mobile technology, especially in education (Ahadia et al., 2021; Putra, 2021; Rhodes & Barshick, 2021). Besides, PowerPoint animation-based interactive media can be used during learning apart from using computers.

The tested results showed that PowerPoint animation-based interactive media effectively affected immune system subjects. It was also felt lacking if students only used books as a learning reference. Therefore, it was proven valid and effective when tested in SMA Panjura Malang class XI IPA. The media also helped the students. Moreover, PowerPoint animation-based interactive media is a learning method that utilizes gadgets specially designed to assist the learning process (Istapra et al., 2021; Movitaria & Shandra, 2020; Norman, 2021). Its development can provide a motivating, fun environment and enhance creativity. The approach in the form of PowerPoint animation-based interactive media can also stimulate children's intellectual, emotional, and psychomotor skills. Besides, it can help solve various learning difficulties in students and make learning in the classroom more interactive.

Based on the 2013 curriculum, schools must apply a scientific approach, both primary and secondary schools. The 2013 curriculum itself is considered a bit burdensome for students because several components must be achieved in one learning process. Here, media use is expected to help

students in the learning process in the 2013 curriculum, where students are required to be more critical and scientific in solving a problem.

In a scientific approach, using PowerPoint animation-based interactive media is an innovation in education. On the other hand, this media is also beneficial for students in delivering material in class and makes students more motivated and enthusiastic in learning, as found during research in the field.

This PowerPoint animation-based interactive media is the result of development in education to foster student interest in English subjects. In the subject, self-introduction material was considered very difficult because it relates to things that may not be known. In this case, PowerPoint animation-based interactive media as a means of seeking knowledge and skills properly is in accordance with other studies (Astiti et al., 2021; Ratnawati, 2020; Sulistyaningrum et al., 2020). It is stated that development is an educational effort, both formal and non-formal, carried out consciously, planned, directed, regularly, and responsibly to introduce, grow, guide, and develop a personality basis that is balanced, intact, in harmony, as well as knowledge and skills in accordance with talents, desires, and abilities as provisions on their initiative to add, improve, and develop themselves towards achieving optimal human dignity, quality and skills, and independent personality. From the product development planned by the researchers, the validation test carried out by the media expert validation obtained the assessment results, and the feasibility was very significant, namely 91.90%, and the advice given was the instrument of the questionnaire, which the researchers explained to revise it. Furthermore, material expert validation also concluded that the product developed could be applied to individual trials. On the material content validation, experts gave 91.90%, and this very significant assessment determines that the product could be carried on in individual trials. Then, tests from peers received 95.85%. It also indicates that the developed product was very feasible to be carried on in subsequent trials. In individual trials, called validation early to find out the student's response to two students, it got 93.65%. This trial was also needed to determine the feasibility of the developed material tested on different groups of research subjects in small group trials and field trials.

Then, in small group trials conducted on five students, students gave responses with a total percentage of 95.42%, indicating progress from the feasibility trial of two students obtaining 93.42%. It suggests that the product could be carried on in field trials. In the field trial, the total percentage yield was 94.23%. This trial was carried out in a large class, namely in the class that was the subject of the trial, amounting to 34 students. The progress of individual trials from the percentage of 88.67% to 94.23% in field trials was significant. Thus, this product could be produced, socialized, and disseminated so that it can be used by teachers and other students in the same subject as a reference in the learning process.

Therefore, the researchers conclude that the product developed has been tested for validity, and the product can be used to implement PowerPoint animation-based interactive media product design. Nevertheless, due to time and cost limitations in carrying out this research, the researchers did not carry out this research within the scope of field trials. Field trials should involve schools other than the individual, small group, and field trials. Field trials involving schools within the school environment in sub-districts, districts, cities, or provinces also require substantial funds. Therefore, in this research, it was only sufficient to carry out in the form of a field. However, the results of this study can be justified because all the validation results showed very significant results, so this product can be reproduced to be used by teachers, students, or other schools as a guide in developing the learning process.

The prior research supported the study results on developing PowerPoint animation-based interactive media, which can be used and distributed to teachers, students, and schools on the same subject. It can be used as guidelines and guidance in carrying out the learning process.

CONCLUSION AND SUGGESTIONS

Several things can be concluded based on the research results on developing PowerPoint animation-based interactive media in English subjects in the self-introduction material for class X students of SMKN 1 Slahung, Ponorogo Regency, as follows. (1) The PowerPoint animation-based interactive media in English subjects in the self-introduction material was developed based on the needs analysis of teachers and students through a needs questionnaire provided by the developer. (2) The validation results of the material, media, and design experts on the product development of PowerPoint animation-based interactive media in English subjects in the self-introduction material revealed very feasible criteria. In addition, (3) based on the research results on the development of PowerPoint animation-based interactive media on English subjects in the self-introduction material, the conclusion could be drawn that the media can be utilized in developing the ability to design creative, innovative, and interesting learning.

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