Developing Science Instruction in English Audiobook to Train Indonesian Prospective Science Teachers' Teaching Skills[1]

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Abstract

English language teaching in Indonesia continues to improve the communicative ability of students. To support English language mastery, school subjects such as mathematics, science, and technology are taught in English. However, the main problem faced by prospective science teachers is their limited English proficiency which leads to limited English communication. Therefore, a tool called *Science Instruction in English Audiobook* was seen as one of the media which can help prospective science teachers to practice the teaching skills in English. Hence, this study aims to develop and evaluate a *Science Instruction in English Audiobook* to help prospective science teachers improve their science teaching skills in English. The skills of science teaching in English were then observed to find out the effectiveness of the audiobook. The subjects were 65 prospective science teachers. The research design was Research and Development consisting of problem analysis, literature study, product design, product validation, revision, trial, revision, application, and revision. The *Science Instruction in English Audiobook* product has been successfully developed. The product is a sound recording in .mp3 format with a duration of almost 1 hour 3 minutes 43 seconds. The audiobook contains science vocabulary material (physics, chemistry, and biology) and teaching skills in English. Following the research design steps, the product has been validated by material, media, and language experts. Based on the validation from the experts, it can be stated that the audiobook product is valid with an accumulated percentage of 98% which means it is feasible to be used as a learning resource to develop the English skills of prospective science teachers. Moreover, it has been found that audiobooks can help prospective science teachers to practice effective science teaching skills in English.

Resumen

La enseñanza del idioma inglés en Indonesia continúa mejorando la capacidad comunicativa de los estudiantes. Para apoyar el dominio del idioma inglés, las materias escolares como matemáticas, ciencias y tecnología se imparten en inglés. Sin embargo, el principal problema que enfrentan los futuros profesores de ciencias es su dominio limitado del inglés, lo que conduce a una comunicación limitada en inglés. Por lo tanto, una herramienta llamada audiolibro de *Instrucción de Ciencias en Inglés* se consideró uno de los medios que puede ayudar a los futuros profesores de ciencias a practicar las habilidades de enseñanza en inglés. Por lo tanto, este estudio tiene como objetivo desarrollar y evaluar un audiolibro sobre instrucción científica en inglés para ayudar a los futuros profesores de ciencias a mejorar sus habilidades de enseñanza de ciencias en inglés. Luego se observaron las habilidades de enseñanza de ciencias en inglés para conocer la efectividad del audiolibro. Los sujetos fueron 65 futuros profesores de ciencias. El diseño de la investigación fue Investigación y Desarrollo que consistió en análisis de problemas, estudio de literatura, diseño de producto, validación de producto, revisión, prueba, revisión, aplicación y revisión. El producto *Audiolibro de Instrucción de Ciencias en Inglés* se ha desarrollado con éxito. El producto es una grabación de sonido en formato .mp3 con una duración de casi 1 hora 3 minutos 43 segundos. El audiolibro contiene material de vocabulario científico (física, química y biología) y habilidades didácticas en inglés. Siguiendo los pasos del diseño de la investigación, el producto ha sido validado por expertos en materiales, medios y lenguaje. Con base en la validación de los expertos, se puede afirmar que el producto audiolibro es válido con un porcentaje acumulado del 98%, lo que significa que es factible utilizarlo como recurso de aprendizaje para desarrollar las habilidades en inglés de los futuros profesores de ciencias. Además, se ha descubierto que los audiolibros pueden ayudar a los futuros profesores de ciencias a practicar habilidades efectivas de enseñanza de ciencias en inglés.

Introduction

There are several skills that an individual needs to master in order to compete globally. These skills consist of having creativity, thinking critically, collaborating, and communicating effectively (National Education Association, 2012). The ability to communicate multilingually is one of the indicators of 21st century skills according to the Partnership for 21st Century Skills (Pattiwael, 2016). English is considered a global

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language because it is used as an official and second language in many countries (Crystal, 2003). Lauder (2010) states that English is one of the languages needed to access and communicate globally.

To support the ability to master international languages, school subjects such as mathematics, science, and technology are taught in English as an international language and are adapted to meet global demands (Stromquist & Monkman, 2000). In the context of education, schools prepare their students to compete globally not only in leading countries such as the United States, Japan, and the United Kingdom, but also in China, Singapore, and Indonesia (Mok, 2004). Therefore, to meet the requirements, English must be introduced and used as the language of instruction in schools. In addition, most multilingual countries have implemented policies to practice bilingual education (Owu-Ewie & Eshun, 2015).

 Content-Based Instruction (CBI) is an approach within bilingual education (Bakti & Szabó, 2016; Lo, 2014) and one of the examples of a contemporary teaching approach where the goal of language learning is active communication (Richards, 2002). CBI has different manifestations, such as Content and Language Integrated Learning (CLIL) or English-Medium Instruction (EMI) (Brinton & Snow, 2017). A CBI approach typically uses authentic material based on the subject matter and to support students' competency. The lesson is designed specifically based on the course purpose of each subject matter. The content, material, and activity should meet the language skills needed to achieve the communicative competence goals and support students' professional needs (Stryker & Leaver, 1997).

As a consequence of bilingual education, the countries that practice it will need competent teachers to teach subjects in the mother tongue and in English, or bilingual teachers. Teachers in bilingual education systems need to have language reinforcement to master language competence and teach their content material (Aquino-Sterling & Rodríguez-Valls, 2016). Although the practice of bilingual education has been carried out in several Central and Southeast Asian countries such as Malaysia, Indonesia, and Kazakhstan (Abduh & Rosmaladewi, 2018; Bahry et al, 2016; Cahyani et al 2018; Gaudart, 1987). Moreover, bilingual education has been rapidly implemented in Europe, Latin American, and Asian countries (Custodio Espinar, 2019; Papaja, 2013; Pérez Cañado, 2018)

Meanwhile, language preparation programs for prospective teachers in Indonesia have been implemented through English courses for certain materials. These courses are given at least in two hours or credits using special materials according to their field of study to prepare students as prospective teachers ready to enter and compete in the world of work (Cahyono & Widiati, 2006; Poedjiastutie, 2017). Therefore, bilingual education in science instruction is crucial since it is one of the indicators of national education standards (Lumbanraja, 2012), then prospective science teachers in Indonesia need instructional media that integrates English as a provision for preparing communication skills combined with content material for science instruction.

Materials for preparing prospective teachers should meet their needs to develop their skills before teaching in the classroom. The material provided should support and provide real experience in classroom learning situations (Halimah & Sukmayadi, 2019). The material to prepare prospective science teachers in this study can help them to sharpen their communication skills in English when teaching. The integration of science content and teaching expressions in English can be used to train prospective science teachers in teaching skills.

The main problem faced by prospective science teachers is their limited English proficiency and this leads to limited English communication. Based on the preliminary observation, it was found out that they have unsatisfactory results based on the assessment of English language skills. In today's globalized world, communication plays an important role in having success in all fields because language is used as a tool to communicate. Effective communication is impossible for people without using language. In addition, one cannot achieve goals, and objectives without using the right language to communicate (Rao, 2019).

Teachers should show good communication skills in class because teachers must master at least eight basic teaching skills consisting of basic and advanced questioning skills, reinforcement skills, variation skills, explaining skills, opening and closing lessons, classroom management skills, teaching skills to small groups and individuals, and skills to lead to small group discussions (Djamarah, 2000). Adequate social and language interaction skills are needed to build effective interactions in the classroom.

The use of audiobooks can be very useful for prospective teachers in various aspects of learning and professional development. Through audiobooks, prospective teachers could train their language proficiency as the requirement of real-world communication (Masykuri et al., 2023). The use of audiobooks also supports Information and Communication Technology or ICT-based learning (Talalakina, 2012) which is of course very useful to support online or blended learning. Sawaddee (2015) has developed audiobooks as

learning media for ICT-based English for special purposes (ESP) learning. By integrating technology such as audiobooks into the learning process, prospective teachers can enrich their knowledge, develop new skills, and be ready to face challenges in the world of education with more confidence and competence.

Thus, the research questions that are proposed are:

1. *What is the validity of the* Science Instruction in English Audiobook*?*
2. *Is the audiobook effective to train prospective science teachers in teaching skills?*

Method

Research design and stages

The present study adopted a research and development (R and D) design from Borg & Gall (1983) which is presented in Figure 1. R and D is the research activity which is stated from the needs analysis step then followed by product development. Borg and Gall in Sugiyono (2010) stated that R and D is a technique used to develop a product used in an educational setting and then validate it. The steps in this process are commonly known as the R and D cycles consisting of reviewing the related literature, developing the product, testing the designed product, and assessing then finally revising the product based on trial results or expert evaluation (Borg & Gall, 1983). Recent studies conducted by Ariawan and Divayana (2020) and Ritonga et al. (2021) showed that this R and D design was used to design, develop and validate the products which were needed to solve problems in the instructional design.
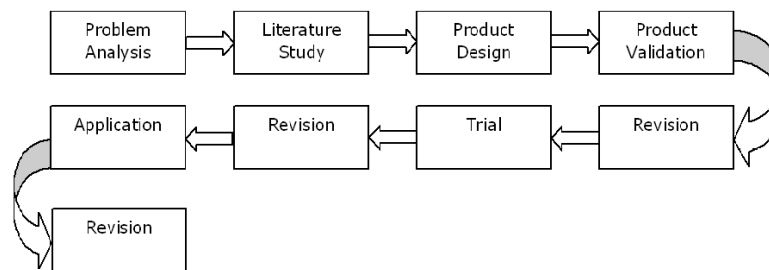

Figure 1: R&D steps

The problem in this research was that prospective science teachers needed a tool or media to support them in improving their science teaching skills. Therefore, the audiobook was expected to be used as a learning aid for prospective teachers to improve their teaching skills in English. This part was a needs analysis process. The steps in this research were:

Literature study

A literature study is the basis for product development to strengthen the product. The audiobook material and validation instrument were developed based on the theoretical review and previous studies.

Product design

The audiobook was designed after conducting material analysis from the previous stage. The design consisted of determining the content of the audiobook. Then after the content material was ready, the recording was carried out to produce the sound for the audiobook. The content material was prepared by the research team as the lecturers of the course. In this stage, the research instruments were developed as well. They consisted of the expert validation form, user sample questionnaire, and teaching skill assessment. The instrument criteria or contents were developed based on the literature study stage which involved the adaptation from previous studies of research and development design and the characteristics of audiobook product.

Product validation

The validation process involved a panel consisting of two experts each in content, media, and language aspects. The validators were selected based on their field of expertise. They validated the product based on the criteria which were written in the questionnaire or the validation form. The experts were lecturers from the internal and external institutions that were selected based on their field expertise. The content experts were the lecturers who taught ESP and they validated the content material of the audiobook that contained ESP material. Meanwhile, the media experts who assessed the audiobook product were the lecturers who

taught instructional media development subject and the language experts were the English lecturers who examined the grammatical structure of the audiobook content.

Revision

After the product design was validated, the weaknesses could then be identified. These weaknesses were then revised to improve the design.

Trial

After the design revision was carried out, the next process was the trial step. It was conducted by choosing five students to evaluate the media. The students were the prospective science teachers of the previous year that had finished the teaching practice subject. They were selected as the user samples to represent students who had high, average, and low scores on teaching performance.

Revision

Based on the findings from the results of the trial stage, the second revision was carried out to produce a valid product.

Application

After obtaining a valid product, the next step was the application of the product in a class. The audiobook was given to prospective science teachers as a learning aid to improve their teaching skills in English. The teaching skills of prospective science teachers were observed after they used the audiobook as instructional media.

Revision

The revision should be conducted after the application steps, however, since there were no suggestions for revision, this step was performed to prepare the product to be published.

Participants

A purposive sampling technique was adopted in this phase. Purposive sampling is defined as choosing a random sampling group in the population section with the most information which is relevant to the research (Andrade, 2021; Guarte & Barrios, 2006). The research subjects were divided into the experts as the product validators, the user samples or the previous year of prospective science teachers, and prospective science teachers who took a Science Instruction in English course. The product validators were of six experts in content, media, and language. Other subjects were five users as the participants in the trial step. This trial step involved this small group of users who validated the product before it was applied/used in the application step (Aulia & Wuryandani, 2019; Faridah et al., 2022). Meanwhile, in the product application step, 65 prospective science teachers who practiced teaching science in English were treated as the research subjects.

Instruments

The instruments of this research were product validation and teaching performance in the form of questionnaires/validation sheets for experts and students or user samples. The instruments were adapted from similar previous R&D studies such as Ghufron et al. (2016) and Khadijah et al. (2022). The questionnaires that were developed based on the criteria of the product were used to find out the product feasibility by assessing the criteria written in each section. The criteria were based on the literature analysis of audiobook format, ESP content, and language structure. The audiobook was examined by the experts of media, content, and language by using the instrument of questionnaires or validation forms, and the results of validation were used as the guidelines to revise the audiobook product based on the experts' suggestions. Other questionnaires were distributed to five students (prospective science teachers) in the trial step to find out the usability process. This instrument was used to find out the user samples' responses to the audiobook. The result was used to improve the quality of the audiobook. The questionnaires of validation and users' response were constructed by following the consent procedure which consisted of respondents' identity (name and students' number) and agreement responses. The consent statements consisted of confirmation of participation without publishing the respondents' identity and agreement of the use of response later in the publication. The statement was presented in the beginning of the questionnaire. In addition, this research also used observation to measure the teaching skills of prospective science teachers. The observation instrument uses the indicators of teaching skills in English presented in Table 2.

Product development

A needs analysis was carried out to formulate appropriate media for students then after analyzing the problems faced by students, The next step was choosing the media as the application of learning technology which can solve problems in the learning process. The instructional media used was an audiobook in English designed to train prospective science teachers to meet global requirements regarding teaching skills. The audiobook has been developed to meet the needs of prospective teacher students in improving their teaching skills in English.

The audiobook contains the integration of science vocabulary material and English language. The audiobook is an audio recorded version of a book (Saka, 2015). The material in the audiobook consists of junior high school science vocabulary content and the expressions and sentences used to teach in class. According to Aufderhaar (2004), learning with audio literature will help future teachers to increase their awareness of new vocabulary, expressions, and idioms, and feel the spoken language of different people in different situations. They can listen to examples of pronunciation of vocabulary and language used for teaching through the audiobook.

Data analysis

There were two questionnaires in this research. The first one was the expert judgment questionnaires. After the experts gave a score for each indicator, the score was then calculated and matched with the criteria in Table 1. Following Sugiyono (2010), the formula used to analyze the score was:

$$\% = \frac{\Sigma Score}{\Sigma MaximumScore} \times 100$$

Percentage (%)	Criteria
81.25% < score ≤ 100%	Very feasible
62.50% < score ≤ 81,25%	Feasible
43.75% < score ≤ 62,50%	Moderately Feasible
25.00% < score ≤ 43,75%	Less Feasible

Table 1: Expert validation criteria adopted from Sudijono (2008)

Based on the expert validation questionnaires, teaching material products can be said to be feasible if an assessment score is >62.50%. If the score of the assessment result is still ≤62.50%, the product needs to be revised again. The second questionnaire was the students' or user samplers' responses that contained seven statements and used a Likert Scale with the responses of Strongly Agree, Agree, Disagree, and Strongly Disagree (see Appendix 1). The statements were determined based on the user needs aspect of the audiobook.

In the Application Stage, the observation was conducted to find out prospective science teachers' skills in teaching science in English. The assessment indicators are presented in Table 2. The indicators were formulated based on the requirement of teaching skills and English language skills. Then the data were analyzed using scores or percentages calculated using the formula of:

$$\% = \frac{\Sigma the presence of indicator}{\Sigma total of indicator} \times 100$$

Number	Indicators
1	Opening lesson interactively
2	Explaining material effectively
3	Managing class effectively
4	Delivering instruction effectively
5	Giving reinforcement
6	Providing learning aids or interesting teaching material
7	Guiding discussion effectively
8	Concluding and closing the lesson
9	Using classroom language properly
10	Performing interactive English speaking
11	Being fluent

Table 2: Teaching skill indicators, adopted from Djamarah (2000)

The scores were then classified into the categories presented in Table 3. Audiobooks are considered effective if at least 80% of students have a minimum category of good teaching performance (Kemp et al., 1994). Adopted from Kustiawan et al. (2020) and Tukiran, et al. (2017), this research performed qualitative and quantitative analyses to analyze the data based on the result in the form of percentages. Qualitative analysis was used to interpret the result collected from the experts and users. Meanwhile, the result of expert validation, users' responses and teaching performance was presented in the percentage.

Score Percentage (%)	Category
81 – 100	Very good
61 – 80	Good
41 – 60	Moderate
21 – 40	Poor
0 – 20	Very Poor

Table 3: Teaching skill category

Results and Discussion

The *Science Instruction in English Audiobook* product was successfully developed. The product was a sound recording in .mp3 format with a duration of 1 hour 3 minutes and 43 seconds. It contained science vocabulary material (physics, chemistry, and biology) and teaching skills in English. The material in audiobook consisted of science material content in the form of classifying vocabulary as well as their pronunciation and how to use classroom language. Students could listen to the examples of pronunciation of science vocabulary and identify the classroom language to teach in the class. a sample of audiobook material is presented in Table 4.

Material	Example
Science Vocabulary	*Physics*: Measurement, Volume, Distance, Heat, Electromagnetic, Convection, Density, Buoyancy, Wavelength, Period. *Biology*: Organism, Growth, Cell, Prokaryotic, Eucaryotic, Enzyme, Ecosystem, Photosynthesis, Predator, Biodiversity. *Chemistry*: Atom, Electron, Matter, Chemical, Properties, Element, Halogen, Mixture, Acid, pH, Solution.
Classroom Language	*Beginning the lesson:* How are you today? I hope you are all ready for your science lesson. We will explore/analyze/do/practice the material/part of *Explaining the material:* The discussion today is Acid and Base, but let me begin with … Let's listen to the video or experiment explanation. The reaction can be described as … *Giving Instruction:* Get into groups of four. Compare your result with your partner. Put the egg in your glass. *Ending the lesson:* I'm afraid it's time to finish now. Do the next exercise tonight, and we'll check it tomorrow. Have a good holiday. *Other useful expressions:* Don't worry, I'm sure you'll do better next time (encouragement). Very good. Well done (giving feedback).

Table 4: Audiobook material

The audiobook was validated by content, media, and language experts. The content experts had ESP expertise. In this audiobook, the material contained the content to help prospective science teacher to improve their English skills in teaching science. The basis for deciding on the material for this audiobook was the understanding of ESP which is a language teaching approach that determines the content of the material based on the students 'goals for learning (Asrifan et al., 2020; Hashmi et al., 2019).

The experts filled out the validation sheet by giving a score according to the criteria. Figure 2 shows the results of content validation from the experts. Five aspects of the assessment were evaluated by material or content experts. They were scope, suitability, accuracy, teaching science, and English skills. The scope

aspect assessed whether the audiobook material provided concept, practice, and technology use and followed the learning objectives. Meanwhile, suitability and accuracy focused on evaluating whether the material was accurate so it could support the learning process and students' needs. Moreover, the content expert also evaluated the integrated material of teaching science and English. These aspects were used by the experts as guidelines to examine the audiobook. Each aspect covered the criteria which experts could assess to ensure the quality of the audiobook. The criteria were derived from the content characteristics such as adjusting the content to the learning purposes and providing the material to support prospective teachers to teach science in English. It was found that four aspects got a percentage of 100%, and one aspect got a percentage of 83%. Based on the recommendation, the experts suggested classifying the material based on the field of study. Hence, according to the data presentation in Table 1, the results showed that the product was feasible and did not need any revisions. Therefore, the product could be said to be a valid product after revising the content based on the experts' suggestions.
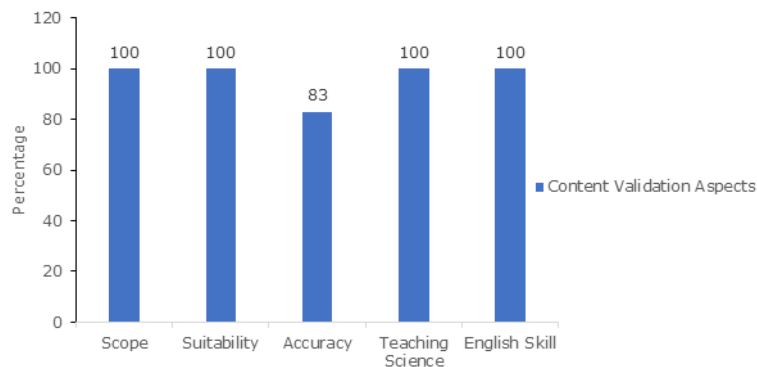

Figure 2: Content validation

The second aspect was media validation consisting of practicality, sound, and narration. These three aspects were selected based on the criteria of the audiobook product which emphasized the sound aspect and ease of use (see Figure 3). All aspects received a total perfect percentage of 100% meaning that all aspects were acceptable since the expert gave the perfect score for every aspect. The advice from media experts was to set the background sound or back sound properly in order not to interfere with the narration voice or the material of the audiobook. Then, it could be concluded that the audiobook product was viable in terms of media validation.
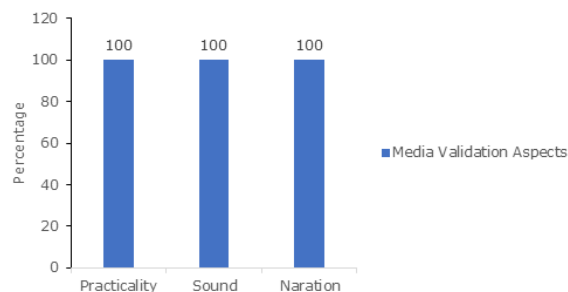

Figure 3: Media validation

The final aspect of the validation process was the validation of language (see Figure 4). Validation was used to check whether there were any ungrammatical structures or incorrect pronunciation in the audiobook script and recording. The language experts gave a perfect assessment of 100% on aspects of readability, grammatical structure, accuracy, and terms. The experts did not add any suggestions for improvement because it met the criteria. Based on the validation results from language experts, the audiobook could be said to be a valid product in terms of language. Language validation was carried out to ensure that there were no pronunciation errors because this media is a model that prospective science teachers should use to improve their English skills. A similar procedure was done by Aldian (2021) who developed audiobooks through validation from language experts. After going through the validation process, it can be stated that the audiobook product is valid with an accumulated percentage of 98% which means it is feasible to be used as a learning resource to develop the English skills of prospective science teachers.
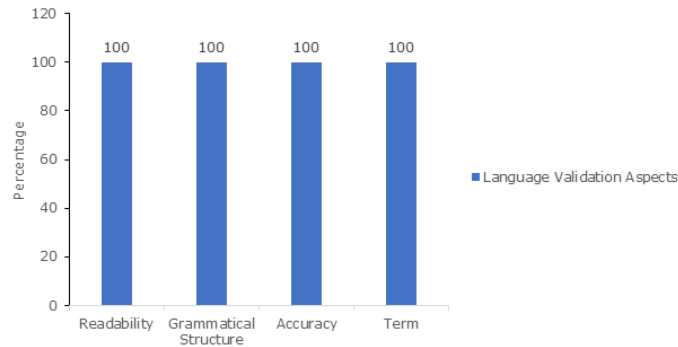
Figure 4: Language validation

The responses from the students as user samples showed that overall, the audiobook was easy and practical to use as media to improve science and teaching skills in English. After the product of the audiobook was determined to be valid, then the observations of teaching skills were carried out by observing the prospective science teachers' performance in the classroom. Teaching practice or peer teaching was carried out for 25 minutes for each student. They taught science material for junior high schools by selecting materials and doing individual teaching preparations. This teaching practice was a simulation before they carried out teaching programs in schools as science teachers. Some students would be placed in international schools that use English instruction, so this course was very useful as a means of teaching training in real classes. This course also equipped students with knowledge of English and training to communicate appropriately in English in teaching in the classroom.

To help prospective teachers produce effective communication interactions, the audiobook was provided as a support to develop their abilities. They were expected to use audiobooks as practice material because apart from having to master science material in English, they were also expected to be able to interact and communicate with students using English. Prior to teaching practice, students were given the opportunity to practice and discuss the material with the lecturer. The expected achievement of abilities was described during lectures so that students could discover the targets that must be achieved. After the preparation stage, students performed teaching practices which were observed and assessed by the lecturer.

The performance of students' teaching simulation was observed during the learning process. They carried out a teaching practice of science with using English as medium of instruction. The results of the observations in Figure 5 show that most of the students achieved good and very good results in the ability to communicate in class with students. Based on the chart of observations, it can be seen that only about 5% of students were in the moderate category meaning that their teaching simulation score was less than 61% of the total score. Meanwhile, 32% of students achieved very good results which means they could reach more than 80% of the achievement indicators. Based on the results of observations, it could be determined that audiobooks could train teaching skills in English effectively because most prospective teacher students were able to show effective teaching skills in the classroom.
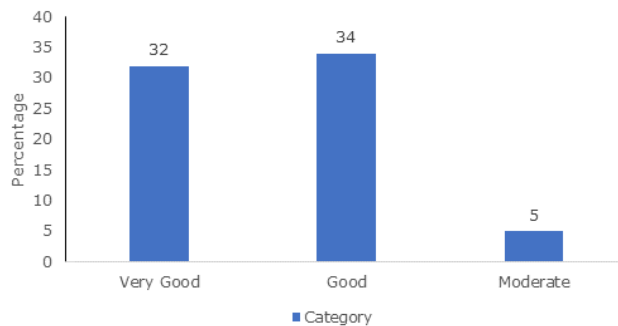

Figure 5: Teaching skill observation

The teaching skills of prospective science teachers were in a satisfactory category because most of them achieved good and very good categories. The role of audiobooks is known to be one of the factors in training students' language skills (Rizal et al., 2022). In the training conducted by Rahman and Azwan (2022), the audiobook also succeeded in helping the participants to improve their speaking skills. Some findings also

support that audiobooks can be used and are recommended to improve speaking skills (Al-Jarf, 2021; Amini et al., 2021; Sembiring et al., 2017).

The use of audiobooks can support improving reading and listening skills (Pinheiro, et al., 2019). To succeed in mastering listening skills, students need a lot of practice. Skills that enable students to use audiobooks independently must be developed through classroom activities (Bilianska, 2018). Audiobooks also have a significant contribution to students' listening skills and can be used as supporting material in advanced foreign language reading and listening classes (Kartal & Simsek, 2017).

Based on the observation of teaching skills as shown in Figure 6, Indicator 11 or being fluent was the aspect that appeared frequently in the teaching practice. Based on the observation notes, most of the prospective teachers seemed to be able to communicate and interact smoothly without many pauses. Fluency can be associated with Indicator 9 which refers to using many variations of classroom language properly when teaching in class. Classroom languages are presented in the audiobook material to help teachers find appropriate expressions from the beginning of the lesson until the end.
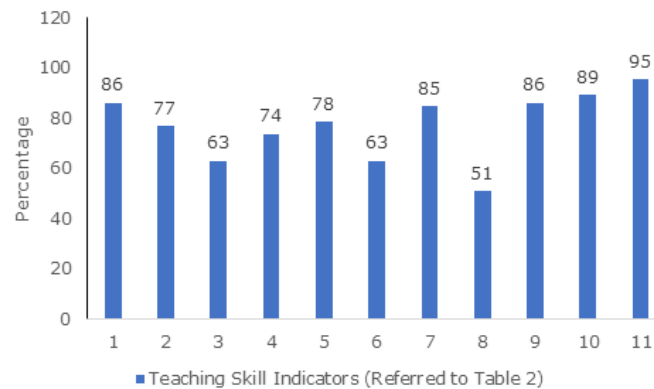

Figure 6: Observation result of teaching skills

Prospective teachers also seemed to be able to fulfil Indicator 1 of opening lesson interactively. In the learning activity, the prospective teachers greeted students enthusiastically by saying 'hi', asking how they were, and conditioning the class. Prospective teachers also ensured that students havd good connections to follow the learning process. When interacting in class, it was known that they used classroom language to talk to students. Meanwhile, the indicator that appeared the least was Indicator 8 or concluding the material and closing the lesson. Teachers often skipped this section because their time management has not been effective. They tended to immediately close the lesson without guiding the conclusion of the material.

Audiobooks have been shown to bring positive feedback to their users and have been written in various studies and are also suitable for various materials. In this study, it was found that the audiobook can train teachers in language skills which has an effect on good interaction skills in the classroom. This supports the finding of Ayunda (2013) who also said that audiobook media can train fluency in speaking or communicating. In addition, Alcantud-Díaz (2014) stated that audiobooks were suitable to be applied to CLIL (Content Language Integrated Learning) learning. The collaboration between language and content lecturers can improve the achievement of the subject (Obi et al., 2021). Therefore, the development of audiobooks can be continued for learning media on other subjects. In this study, the results show that this media is effective for training the communication skills of prospective science teachers in teaching, but the next question is whether when communication takes place casually using everyday language, does the prospective teacher's communication skills still take place well? Of course, this can be the focus of further development

Conclusion

In this study, the developed audiobook was determined to be useful according to expert validation with a total percentage of eligibility of 93%. Moreover, it has been found that audiobooks can help prospective science teachers to practice effective science teaching skills in English. This brings a positive impact because they can develop global communication to master one of the 21st-century skills. This is an encouraging thing because audiobook media can be recommended as a learning medium in order to help students to learn independently and support ICT-based learning. The development can be continued by considering material that relates with the characteristics of the audiobook.

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Appendix 1

User's Response Questionnaire

I, the undersigned:

Name　　　　:

Confirm my participation as a user sample to give responses on the product of *Science Instruction in English Audiobook*.

Understand that any information given by me may be used in future reports, articles, or presentations by the research team.

Understand that my name will not appear in any reports, articles, or presentations.

Agree to give my statements related to the product of *Science Instruction in English Audiobook*.

Instruction:

Mark (✓) to the column or option of Strongly Agree (SA), Agree (A), Disagree (D), or Strongly Disagree (SD) that indicates your opinion of the statements below:

Statements	SA	A	D	SD
The audiobook is used easily.				
The audiobook can be used as instructional media every time and everywhere.				
The sound is clear.				
The audiobook provides English Material.				
The audiobook provides teaching science in English.				
The audiobook can be used to improve English skills.				
The content material is easily comprehended.				

(City),

Respondent,

(Name)