Advancing ESP Material Development: An Analytical Approach Using 4D Models

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Article Info	Abstract
	This research aims to make teaching materials for Management Students of the Faculty of Islamic Economics and Business UIN Sunan Gunung Djati Bandung. This research uses a research and development (R&D) approach with a 4D (Define, Design, Develop, and Disseminate) model. A total of 78 students and experts from ESP teachers were taken as research samples. The results of the study show that the 4D model can produce relevant, organized and effective ESP material in the context of management. For this reason, the product is considered to have met the requirements for efficacy, practicality, and validity, so the product can be used after revision. Suggestions for further research on integrating digital technology into ESP instruction to improve student engagement and accessibility.

INTRODUCTION

The rapid development of digital technology has significantly transformed the field of English for Special Purposes (ESP), making learning more interactive, accessible, and effective. In ESP learning, where language teaching is tailored to meet the specific needs of a wide range of professional and academic fields (Dudley-Evans & St John, 1998) Digital tools such as Google Classroom, Moodle, Youtube, AI, canva, etc, play an important role in improving the development and delivery of learning materials (Ulfa & Sudarso, 2020). To guarantee relevance, engagement, and practical applicability, the creation of successful ESP materials requires a methodical and planned approach. The four stages of the 4D Model— Define, Design, Develop, and Disseminate—are one such strategy. A thorough framework for evaluating and creating excellent educational resources that are

suited to each learner's particular linguistic and professional requirements is offered by this model.

The phenomenon that exists in the Management Department of UIN Sunan Gunung Djati Bandung, there are several obstacles in the application of English learning using the ESP approach. Lapele (2019) said that lecturers should consider using real-life and authentic materials that reflect the specialties of the target audience. Second, the unavailability of teaching materials that meet the needs of management students of UIN Sunan Gunung Djati Bandung. Clinton, Legerski, & Rhodes (2019) said that learning activities can run effectively and efficiently if learning resources are available in the form of textbooks. However, the fact is that some commercial textbooks available in the market are not suitable for the needs of different learners, each university, each academic year, and each class. Therefore, this research is important to produce teaching materials that are in accordance with the needs of management students of UIN Sunan Gunung Djati Bandung.

Some previous researchers Fadlia, Asra, Zulida, & Santosa (2022) developing ESP-based digital teaching materials in vocational high schools (SMK) is carried out using research and development (R&D) methods adapted to the 4D model. Rahmadany, Husein, & Siregar (2021) create English teaching materials for grade IV students based on the principle of integrated language satisfaction at SD IT AL Hijrah 2 Deli Serdang. Syam & Furwana (2022), compiling English books for Islamic Education students using 4D models. Rohana & Thahir (2020), researching the efficiency of teaching resources for Basic Teacher Education (PGSD) students using the SAVI model. The results of his research stated that the English education resources that have been built show their efficacy. Syakur, Junining, & Mubarok (2020), develop ESP learning materials for Diploma Three (D3) Pharmacy students of the Surabaya Academy of Pharmacy using the ADDIE model. (Salsabila, Iriani, & Sri Handoyo, 2023) study how to make video learning media using 4D models. Some of the results of the study show how the 4D model can be applied to create learning materials, including ESP materials, that can meet the specific needs of students and improve the quality of learning.

This research is different from the previous research, which uses an in-depth analytical approach to the 4D model in making ESP based on student needs data and emphasizes the importance of contextualizing language learning that is relevant to the needs of management students. The goal of exploring the analytical

application of the 4D Model in the development of ESP materials is expected to increase the relevance of content, pedagogical effectiveness, and student engagement. By adopting this model, educators and curriculum developers can systematically design materials that fit the professional goals and communicative competencies of learners.

METHOD

Research Design

A four-dimensional development model is used in this study process to produce English textbooks. This model was chosen because of its easy process and methodical approach that is aligned with the required research development process. There are four stages in this development model: defining, designing, developing, and deploying. The R&D method stage begins with identifying the needs of the students. Then, plan the product. Next, develop a product prototype based on planning and testing by students. The final stage is to revise and disseminate the product based on feedback.

Participants

The research participants are all students in the first semester of the Faculty of Islamic Economics and Business, Management Study Program, 2023–2024 academic year, totaling 292. The purposive sampling technique was used to determine the research sample, with the criteria of students majoring in management class of 2023, attending ESP classes, as many as 90% attendance, and having an interest in ESP, so 78 students were selected. In addition, experts are involved as validators to assess the feasibility of the product. They come from academics and practitioners who have backgrounds in teaching English for a specific purpose, curriculum design, and the development of teaching materials based on research and development (R&D) models. Their selection was based on their profession as an ESP teacher, their research track record, scientific publications, and their educational background.

Instruments

The research instruments were taken from student questionnaires and validated by experts. The first questionnaire question was given to understand more about the needs and interests of 78 Management students who are learning English. Example: What is your motivation to learn English? What English proficiency do you

want to have? What is your goal in learning English? Is the use of technology important in English language learning?

Once students have created and utilized the product, a questionnaire is then given to them to assess whether the product meets their needs and is suitable for use. The student questionnaire contains 26 questions, which are as follows: 1) Is the book presented in accordance with the Competency Standards (SK) and Basic Competency (KD)?, 2) Is the book relevant with your field or interest?, 3) Is the content of the book accurate and based on reliable sources?, 4) Is there learning support materials available in the book?, 5) Is the content of the book up-to-date?, 6) Are there learning activities available in the book?, 7) How is the level of difficulty of the questions?, 8) Is the material in-depth?, 9) Is the material clear?, 10) Is the material well actualized?, 11) Is the systematics of the presentation of the material logical?, 12) Is the language used in the book straightforward and to the point?, 13) Is the language contained in the book communicative?, 14) How is the information presented in the book?, 15) Is the language used in the book in accordance with the development of the students?, 16) Is the material's mindset coherent and integrated?, 17) Is the English structure used good and correct?, 18) Is the achievement of the material in the book in accordance with your competence?, 19) Is the language used in the book effective and efficient?, 20) How is the use of terms, symbols, or icons in this book?, 21) Does the book have a clear purpose?, 22) Does the order of presentation in this book facilitate understanding?, 23) Does this book have complete information? 24) Are the letters used in this book interesting and easy to read? 25) How is the layout of this book? How are the illustrations, drawings, graphics and photos in this book? and 26) How is the design of the appendix of this book?

The students used Google Form to respond to those questionnaires. In addition, to verify the legitimacy of the product, an expert opinion is also required. Before the trial to get expert validation, a checklist is provided to assess the validity of the product.

Data Analysis Procedure

The data was analyzed quantitatively to analyze student questioners and expert reviews. The largest percentage is seen as an accurate indicator of a student's state. Expert judgment of how the item is presented provides secondary data. Using descriptive quantitative analysis, the results of expert validation are

quantitatively examined. To confirm the feasibility of the design, it is supported by several literature review works.

Descriptive quantitative analysis was chosen for this study because it has been shown to be effective in previous studies conducted by (Syam & Furwana, 2022), (Saragih, 2014) and (Fadlia et al., 2022), related to the evaluation of the development of ESP material. The researcher can objectively describe the response patterns and perceptions of participants using this method, which is in line with the research on the development of teaching materials based on the 4D model. In addition, this method provides more measurable data on the effectiveness of the developed material, so that the results of the study can be more easily analyzed and compared with previous studies.

RESULT

Four Stages in a 4D Model (Define, Design, Develop, Disseminate)

The development of English teaching materials for Management is described through steps, namely information collection (identification of teaching material needs for students and lecturers), design, validation of product analysis design by experts), design improvement, product trial I product revision, product test (II), product improvement, and final product. Regarding the procedure for developing teaching materials by Sivasailam Thiagarajan, Dorothy S. Semmel, and Melvyn I.

Determine the Level

Semmel (1974), the initial stage (define) carried out by the researcher is to diagnose the needs of students using questionnaires. The results of the analysis of student needs can be seen in the table below.

Table 1. Student Needs Analysis.

Not	Student Analysis	Serves	Description
1	Background of students' English proficiency	69,4 %	Basis
2	Motivation to learn English	54,5%	Want to have good career prospects
3	Students' English language proficiency	74,3 %	Speak
4	Objectives of students learning English	71,3 %	Able to communicate actively
5	Have a textbook or other handbook for English material	57,%	Have no
6	Materials most needed by students	50,7%	Business

7	The learning activities that students are most interested in	43,3%	Discussion
8	The need to use technology in learning English	100%	Necessary
9	You have difficulty understanding the material through the teaching methods and materials applied by the lecturer	66,2%	Not difficult
10	Availability of language learning support facilities	73,5%	None

Hutchinson & Waters (1987) Define analysis based on the difference between what they feel they need to know and what they feel they need to know. Here, the emphasis is on "the shortcomings that represent the difference between the learner's current competencies and what is required to be proficient in goal setting. According to this concept, language requirements are the result of negotiations between learners and their communities. Lecturers can determine what should be emphasized in the material and what kind of teaching approach students like by conducting a needs analysis.

Design Stage

Furthermore, based on the results of the needs analysis, the researcher began to design a book outline which included the book cover, book title, and table of contents, the content of teaching materials, and setting the final learning goals in each chapter. This can be seen in the following image:

Figure 1. *Cover Teaching Materials.*

The book cover design above captures the essence of collaboration, with one vision and one mission to achieve a common goal in business. This is consistent with the management department's slogan, which is "one management".
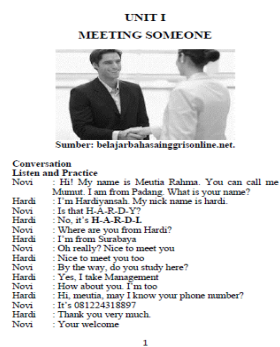
Figure 2. Table of Contents

Figure 3. *One display of the content of the teaching materials.*

Development Stage

The results of the design of teaching materials then need to be validated by experts and students. The purpose of this validation is to determine the feasibility of the teaching materials that have been developed. The Validator Team involved in this study consisted of material experts in the field of English Wakhid Nashrudin, M.Pd., Ph.D., from IAIN Sheikh Nurjati Cirebon; linguist by Dr. Nia Kurniawati, M.Pd., from UIN Sunan Gunung Djati Bandung; and media specialist by Prof. Drs. Syuaeb Kurdie M.Pd., from IAIN Syekh Nurjati Cirebon.

Table 2. Validation Results by Materials Experts

Not	Wrong Parts	Error Types	Suggestions for Improvement
1	2	3	4
1	Unit arrangement	The arrangement of the unit is less organized according to needs and ability levels.	Reorder them in a more logical order.
2	Unit II: Conversation	The text does not match the unit title.	Replace the text that match the unit title.

3	Unit III: Exercise 4, page 45 Exercise 7, page 46 Unit IX Exercise 3, page 106	The words used to complete a paragraph are too tight to be difficult to understand.	Adjust the spacing between words, or separate them using columns.
4	Unit IV Exercise 12, page 51	The instructions are unclear.	Adapt the word "blog" to the appropriate context.
5	Unit X, Exercise 1, page 109.	The order of the numbers is unclear.	The outline needs to be fixed.
6	Unit I exercise 13, page 14 listening material	No text	It should be accompanied by text for listening material.

Table 3. Analysis of Validation Results by Materials Experts

Not.	Validated Aspects	Percentage	Feasibility
1	Conformity of Competency Standards & Basic Competencies	60	Quite feasible
2	Student needs	60	Quite feasible
3	Material accuracy	60	Quite feasible
4	Learning material support	80	Appropriate
5	Material updates	60	Quite feasible
6	Availability of learning activities	80	Appropriate
7	Question difficulty level	60	Quite feasible
8	Truth of the concept	60	Quite feasible
9	Depth of material	60	Quite feasible
10	Material achievement for competency achievement	60	Quite feasible
11	Clarity of the material	40	Not worth it
12	Material Actualization	60	Quite feasible
13	Systematic logical presentation	80	Appropriate
	Middle	63	Quite feasible

Table 4. Validation Results by Linguists

Not	Wrong part	Error Types	Suggestions for Improvement
1	2	3	4
1	In the Preface section	The language still feels like an Indonesian translation. Indonesian English.	Use good and correct English rules.
2	Unit I, mismatches between characters in the dialog Unit II In Conversation, there is an inappropriate use of prepositions.	Use of the word "in"	Correct it with a more precise preposition, i.e. "into".

3	Unit I, Unit II, UNIT III etc: Many indirect and convoluted task sentences	Command sentences in Exercise 2 page 2 Exercise 4 p. 3 "Write a missing form" is not correct. Exercise 5 p.5 "Discuss the following questions" Exercise 8 p 10 Exercise 12 page 13	Should Fill in the missing fields with the appropriate words.
4	Unit I, p. 1 word "source" Unit XI says "source"	Inconsistency in the use of terms	Consistency in the use of terms from start to finish.

Table 5. Validation Results by Media Experts

Not	Wrong part	Error Types	Suggestions for Improvement
1	2	3	4
1	cover	Writing titles and locations too close to each other to look out of sync	Better reset
2	Book size does not conform to ISO standards	Book size 20 x 14.	ISO B5 Standard; 17.6 x 25.0
3	Many word layouts are . too close together		Adjust the spacing between words, or separate them using columns.
4	There is no place to write down the answers to practice questions	All units	Provide a place to write down the answers to the practice questions
5	There is no glossary for every theme	All units	We recommend that you add a glossary to each theme
6	No answer key for practice questions	All units	Must be equipped with an answer key for the practice questions.

Table 6. *Analysis of Validation Results by Media Experts*

Not.	Validated aspects	Percentage (%)	Conformity
1	Color selection accuracy	80	Appropriate
2	Color Compatibility on the Cover	80	Appropriate
3	The beauty of the cover choice	80	Appropriate
4	Image size accuracy	80	Appropriate
5	Image clarity	80	Appropriate
6	The pictures in this module are interesting	80	Appropriate
7	Relevance of the image to the material Real images according to the concept	80	Appropriate
8	Image placement	80	Appropriate
9	Type and size selection Suitable type & size	80	Appropriate

10	Font size consistency	60	Quite feasible
11	Types and letters are easy to read and	80	Appropriate
12	based on student characteristics	60	Quite feasible
13	Text location accuracy	40	Not worth it
14	Book size	60	Quite feasible
15		60	Quite feasible
	Middle	72	Appropriate

Table 7: Validation test results.

Not.	Aspects	Count	critical	Result
1.	Language	0,9151	0,3	legitimate
2.	Material	0,8773	0,3	legitimate
3.	Media	0,9022	0,3	legitimate
	Middle	0,8982	0,3	legitimate

The results of media validation were obtained with an average calculation of 0.8982. According to (Scott, 2013), a medium can be said to be valid if the calculation is more than 0.30. After passing the validity test stage, the next step is the teaching materials that will be tested by students, to be tested for feasibility. To find out the effectiveness of textbooks in improving learning outcomes, the activity continued by providing practice questions whose material was taken from textbooks. The results of the feasibility test can be seen in figure 4.
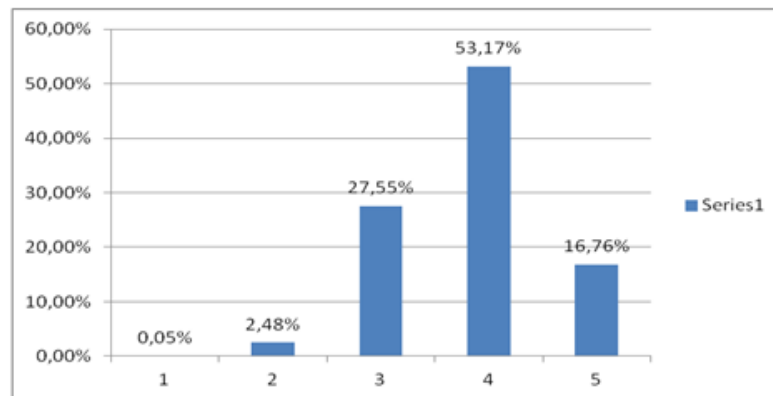

Figure 4: Feasibility test results

Stages of Deployment

The results of the feasibility test showed that 53.17% of students stated that the English for Management book was worth using. The results of the trial for students can be seen in Figure 5.
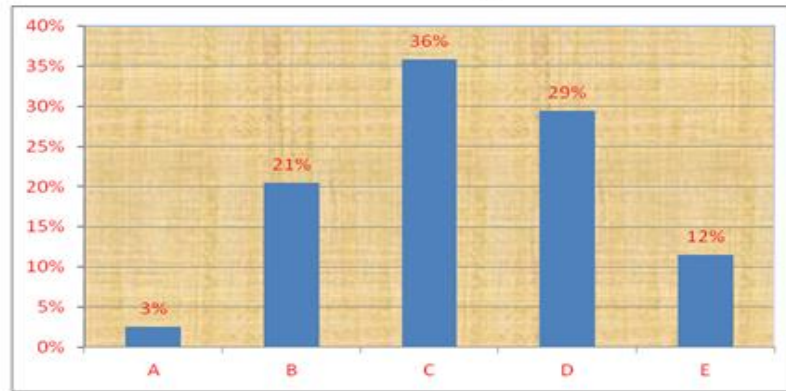
Figure 5: Learning media test results

Although the results of the feasibility test by the students are quite satisfactory, it is contrary to the results of the test questions which show that 35% of students get an average score of 60 which means that most of them get a C grade. This shows that there is still a need for evaluation & increased reading and assignment difficulties.

Final Products

There are 12 units in the English textbook. Unit I discusses Meeting Someone; Unit II discusses Giving a Successful Presentation; Unit III discusses Telephone; Unit IV discusses Money Issues; Unit V discusses Types of Business Organizations; Unit VI discusses Corporate Structure; Unit VII discusses Business Ethics; Unit VIII discusses Recruitment; Unit IX discusses CV and Cover Letter Writing; and Unit X discusses Job Interviews; Unit XI discusses Negotiations; Unit XII discussed the Meeting. Four tasks of integrated skills, as well as exercises with grammar and pronunciation, make up each unit. Exercises in grammar include tenses (simple present, present continuous, simple future, and simple past tenses), informative questions (four WHs + one How), differences between "would" and "would", expression of opinion, "agree" and "disagree", etc

DISCUSSION

ESP Material Development Using 4D Models

Material development, according to Azarnoosh, Zeraatpishe, Faravani, & Kargozari (2016) is a practical activity that involves the creation, assessment, modification, and utilization of material intended to support language development and acquisition. To achieve the objectives of the learning material, the learning material must be developed.

There are several research and development models including 1) Thiagarajan's 4D Model in 1974; 2) ADDIE Dick and Carry model, which is used to build a learning system; 3) Borg and Gall models; and 4) Plomp invented the Plomp Model. In addition, more development models created by professionals including the Kemp Model Development and the ITS Model Development Model (Instructional Systems Development Procedure) state that Dick & Carey. Experts often put forward development research theories as a way for researchers to improve teaching standards (Rizki et al., 2016).

For the analysis of this teaching material, the researcher chose the 4D model because it has been proven to be a systematic and effective approach to developing learning materials (Yaumi, 2012). Moreover conditional 4D models, methodically structured and include a series of tasks that can be used for problem-solving and flexible, can adapt to the unique demands of the school and its student body (Maula, 2021). The 4D model includes four main stages—Define, Design, Develop, and Disseminate—(Thiagarajan, 1978) which ensures that the materials developed are based on robust needs analysis, designed with appropriate pedagogical principles, tested for validity and effectiveness, and disseminated optimally. With this comprehensive structure, the 4D model is well suited to ensure the quality and relevance of the ESP material produced.

4D Stages

At the definition stage, the researcher analyzes the curriculum and student needs (Khansir & Pakdel, 2014). Curriculum analysis is carried out to outline which competencies and skills will be included in the teaching material. The results of the curriculum analysis state that management graduates are expected to have competence in the field of management science (finance, marketing and human resources). Therefore, in designing teaching materials, it is necessary to include materials that are relevant to management aspects. According to Dubin & Olshtain, (1980), there are several things that teachers need to consider when creating English teaching materials.

a. Alignment of items with the curriculum.

b. In order for students to develop their desires and preferences, the material must give them options. Student assignments, learning preferences, presentation methods, anticipated outcomes, etc.

c. The linguistic abilities covered by the course material.

d. The original text is part of the content.

e. How students react to the course content.

In the next stage, the researcher determines the learning objectives based on the results of the analysis of student needs (Macalister & Nation, 2019). According to (Saragih, 2014), needs analysis is the process of identifying and ranking students' linguistic requirements. This includes understanding the linguistic, communicative, and professional requirements specific to learners based on their field, such as engineering, medicine, or business (Basturkmen, 2019). By accurately identifying these needs, the material can be tailored to address specific language and vocabulary skills required by the learner's professional context. A needs analysis should be done by the materials designer to determine what and how students will learn. According to (Hutchinson & Waters (1987), needs analysis examines on; 1) What needs students need to know to work well in the target environment. Needs are categorized according to the demands of the target situation; 2) Shortcomings, which examine what students already understand and 3) Desire analysis is carried out to find out what students are interested in learning. It seeks to assess current resources, gather feedback on language implementation and content, and improve the language component following the program's learning objectives.

The results of the analysis of student needs showed that 69.4% of Management students had English proficiency levels at the basic level, 54.5% of students studied English because they wanted to have good career prospects, as many as 74.3% of students wanted to be proficient in speaking, as many as 71.3% stated that their goal was to learn English in order to be able to communicate actively, 57% of students stated that they did not have textbooks or other handbooks for English materials, As many as 50.7% of students stated that the material needed was about business, as many as 43.3% of the learning activities that students were most interested in were discussions, 100% of students stated that it was necessary to use technology in learning English, as many as 66.2% stated that they did not have difficulties in understanding the material through the methods and teaching materials applied by lecturers, and as many as 73.5 stated that there was no availability of language learning support facilities in the faculty.

Based on the results of the needs analysis, in general, the goal of students learning English is to be able to communicate actively. Syam & Furwana (2022) said that most students want to become proficient speakers according to the context.

Therefore, the material must reflect real situations and be designed with activities and assignments that encourage students to have speaking skills. The main essence of ESP is the meaning of activities that activate students. With its diverse capabilities, absorption is flexible. Each activity is always accompanied by dialogue-based interaction to bridge the knowledge gap and language flexibility between participants through lecturer and student interaction (Bracken et al, 2017).

The second stage is design. This stage is to create a prototype of teaching materials according to the needs of students. The main objectives of the design stage are to choose media, material formats, content, learning activities, templates, and evaluation of learning materials (Yassi, 2018). The initial design can be seen in figure 1. Book cover, picture 2. The book format consists of 12 relevant materials with the results of student needs analysis and figure 3. The following is a material analysis with an ESP approach.

Unit I discusses Meeting Someone. This material covers how to communicate formally and informally to introduce yourself (see figure.3), as well as some terms commonly used in business introductions. The activity was carried out with a simulation of a business introduction and a case study of cultural differences in professional introductions. His assignment was about making a self-introduction video using Youtube media.

Unit II with the topic of Giving A Succesful Presentation. This material contains tips on how to present a presentation well. Reading texts about the structure of the presentation (opening, content, and conclusion), good body language, and techniques for answering audience questions should be in place. Student activities conduct presentation simulations, slide-making exercises, and evaluations based on video recordings to improve these abilities.

Unit III is the topic of Telephoning. This material covers how to communicate through telephony. Discuss how to handle customer complaints, and common phrases used in the phone. The assignment is for students to create a phone script. His activities play a role in business calls, and listen to examples of business conversations.

Unit IV is on the topic of Money Matters. This material discusses learning financial terms such as income, profits, costs, and investments. Students learn to read financial statements, talk about economic trends, and about financial

decisions. His assignment is to analyze the company's financial case studies and discuss global economic issues.

Unit V is about types of business organizations. This material provides a basic understanding of the business model and structure of the company, which should include the advantages and disadvantages, types of business organizations, and legal terms related to the business. This understanding can be strengthened by looking at case studies of large companies and talking about comparing business models in different countries.

Unit VI discusses Company Structure. The focus of this material is to study business terms such as CEO, manager, supervisor, department, and report path. Improve the ability to read and understand organizational structures. The assignment of students is to analyze organizational charts or make job descriptions.

Unit VII discusses Business Etiquette. This material is essential for increasing students' professional awareness and for cross-cultural communication. Student activities include case studies or role-plays about professional emails, how to welcome clients, and meeting etiquette.

Unit VIII discusses Recruitment. This material provides an understanding of the recruitment process of multinational companies. In the context of recruitment, students read and write job vacancies with job requirements that must be included. The activities of students can play role play as interviewees and interviewers

Unit IX discusses Writing CV and Letter of Application; This material explains the content of the job application letter. Steps to make a good and correct job application letter, resume and curriculum vitae. The assignment is for students to write CVs and cover letters based on real job vacancies or peer assessments.

Unit X discusses Job Interview. The reading material contains about very important speaking skills in the world of work. Speaking skills, students role-play to answer common and specific questions, practice answering difficult questions, and self-evaluation through or recorded interviews.

Unit XI discusses Negotiation. This material focuses on effective negotiation and communication techniques in negotiations. The activities of students can conduct negotiation simulations, conflict resolution techniques, and diplomatic communication exercises must be included.

Unit XII discusses Meetings. This material develops formal speaking skills and actively participates in discussions. In the reading text, techniques for organizing

meetings, how to give professional opinions, and how to overcome conflicts in meetings are presented. The activity is that students can simulate meetings in various business contexts.

Overall, the content of the material, assignments and learning activities presented in the English teaching materials for management must be able to encourage students to be actively involved in using English according to the context. The selection of topics for each unit has been adapted to the demands of the students to provide them with knowledge related to the elements of management. Thus, the learning process is more focused and relevant when the material is specifically designed to meet the professional demands of students. This guarantees that the resource is useful and immediately applicable to the learner's professional setting in addition to being instructive. Meanwhile, the research conducted by (Kasyulita, Donal, Antoni, Niati, & Eripuddin, 2022) management students at Pasir Pangaraian University. They present six topics in the English material design, namely self-introduction, introducing people, how to be a good presenter, how to make a cover letter, how to explain something, and how to make something.

The next stage of this research is development. This stage of development really involves the production of materials. This stage including writing a book, drafting a training plan, and producing multimedia materials is part of this. The goal is to provide dynamic and engaging material tailored to the individual needs of learners. According to (Fitriyah, 2018), develop English language materials that emphasize educational experiences and use CTL ideas to promote more successful learning.

Therefore, the first step the author should list the competencies and basic indicators of each unit. Example, the course learning outcomes of UNIT I, the students are able to:

Listening: Respond the meaning of transactional and interpersonal orally about the models to introduce self and others

Speaking: Express the meaning of transactional and interpersonal orally about the models to introduce self and others

Reading: Responds the meaning of simple monologue text in written that related to the topic of introduction oneself and others

Writing: Express the meaning of simple monologue text in written about the models to introduce others

Language Focus: 1) Identify some expressions related to the topic (vocabularies), 2) Use auxiliary verbs (to be) in sentences, both in present and past tense form (grammar), 3) Pronounce the ways to stress on one syllable in a word and the contraction in sentences (pronunciation).

This is in accordance with the standards set by the Ministry of National Education (2008) that teaching materials at least include, among others; Learning instructions (students/lecturers) competencies to be achieved, content or content of learning materials, supporting information, exercises, work instructions, can be in the form of worksheets, evaluations, responses or feedback on the results of the evaluation.

The principle of presenting material descriptions according to Squirting (2009) must meet several of the following requirements (1) the material must be relevant, with the essence of competence, (2) the material is within the scope of the core topic, (3) the presentation of the material is logical, systematic, interactive, communicative and not rigid, (4) pay attention to the background/arrangement of the students.

Based on these principles, the module material developed by the educator himself can be adjusted to the characteristics of the students, such as the social environment, culture, geography, initial abilities that have been mastered, interests, and background of the students. The development of this module can answer or solve problems or difficulties in learning (Ministry of National Education, 2008); (5) using interesting and challenging presentation techniques and methods.

During the development stage, the researcher performs two main tasks, namely developmental design and expert assessment. Experts are involved to determine whether a product design is feasible as well as improve the quality of the assembled materials. After the product design of the teaching material is prepared, then experts consisting of material experts, linguists, and media experts assess the product's suitability.

According to material expert, Wakhid Nashrudin, M.Pd., Ph.D., there are several units whose arrangement and structure patterns are not the same. Example of UNIT X Giving A Successful Presentation.

1. Brainstorming (Pre Material)
   a. Reading text 1
   b. Exercise 1
   c. Exercise 2
2. Grammar Focus 1
   a. Exercise 3
3. Reading text 2
   a. Exercise 4
   b. Exercise 5
4. Grammar Focus 2
   a. Exercise 6
5. Listening Practice
6. Writing Practice
   a. Exercise 7
7. Expression in Speaking

In addition, Unit III: Exercise 4, page 45, Exercise 7, page 46 Unit IX, Exercise 3, page 106, all of the words used to complete the paragraph are too tight so it is difficult to understand. For more details, the assessment from the subject matter expert can be seen in the table.2. According to him, to facilitate the learning pattern, the arrangement should be adjusted logically, from the easiest to the most difficult and according to the rules of the arrangement of language skills, namely Listening, Speaking, Reading and Writing.

Meanwhile, the assessment of Dr. Nia Kurniawati, M.Pd., that many task sentences are indirect and confusing. It can be seen in Unit I, Unit II, and Unit III, etc. Example: 1) "Explain the following words and make up sentences with either of them". 2) "How would you generally feel happy or unhappy, if you were in the following situations. Use the words in Italic to help decide." He suggested that it should be for task sentences, the language is made simpler and straight to the point. Furthermore, in Unit I, page 1, the word "source", Unit XI says "source". That means inconsistency in the use of the term. In unit IV Exercise 12, page 51, the instructions are unclear. According to him, the use of the Blog application is adjusted to the context.

The next stage was validation from a media expert, Prof. Dr. Syuaeb Kurdie, M.Pd. The evaluation began with the cover of an English book, noting that the title and location were written too close together, giving the impression that the text was out of sync. Rearrangement is preferred. In addition, the size of the book deviates from ISO guidelines, with some word layouts placed too close to each other, no dedicated place to record the answers to the practice questions, no theme-specific

glossary, and no practice question answer keys. There are some task instructions that use Youtube and Blog applications, but it seems that these media are not well integrated.

According to Sirait, Harahap, & Handayani (2021), the weak point in this teaching material does not include listening skills and is not integrated with the learning media. Learning media is everything that can be used to channel messages (learning materials) so that it can stimulate students' attention, interests, thoughts, and feelings in learning activities to achieve certain learning goals. Research results Nasution (2023) shows that the use of social media such as Instagram demonstrates the ability to teach English for Special Purposes (ESP), especially collocations and colligations. Additionally, according to (Chew & Lee, 2013) The use of blogs in ESP classes is an effective tool to improve students' Extensive Reading. Therefore, suggestions from validators are important to use various digital media such as Youtube, Instagram, Moodle, and Canva to make learning activities more interesting, practical and accessible to students (Sumarsono, Nurisma, & Widyoseno, 2018).

After the validator assesses the product, the next stage is to test the feasibility of the product. The results of the validation test by the experts showed an average score of 60 (see figure 4). This means that the product is categorized as quite feasible and can be tested. Overall, the validation results of the three validators stated that the English for Management book is quite feasible to use after going through the revision stage first. According to Lestari & Hartati (2017), the results of the development of materials in the form of modules that are feasible to be used even though they have not reached the deployment stage.

The next stage, the product goes through the process field trials. The purpose of the product trial is to evaluate how well the material meets the learning objectives by Collect qualitative evaluations of products under development (Borg & Gall, 1984). The results of the trial showed that 35% of students obtained an average score of 60 which means that most of them obtained a grade of C. The results show that there is still a need for evaluation and improvement in the difficulty level of reading texts and assignments. According to Maula (2021) that the evaluation of teaching materials will be of high quality if it meets the requirements of readability, usability, and effectiveness. High-quality and successful learning outcomes are guaranteed by a repetitive process of material development, testing,

and improvement. Once revised and deemed feasible, the book can be distributed to students.

The final step of the 4D stage is the dissemination stage. At this stage, teaching materials are disseminated and produced on a larger scale. In class, teaching materials are introduced to students. Instructors and students begin to use them in an authentic learning environment, guaranteeing that the resources are useful and efficient. The performance of the product in actual educational situations is the basis for continuous evaluation even after it has been distributed. To keep the material current and useful at all times, instructor and student feedback is included in the ongoing improvement process.

The results of this investigation demonstrate how well the 4D approach (Define, Design, Develop, Disseminate) advances the creation of ESP materials. However, the drawback of this study is that the teaching materials have not been fully integrated with technology such as YouTube and other digital tools. Deeper insights into how each stage of the 4D model contributes to content refining and instructional efficacy are provided by the analytical technique used in this study. Therefore, the use of the 4D Model results in a significant increase in the relevance of ESP material to learners' unique requirements. The benefit of creating this 4D model is that it is easier to use and more suitable for module development, and the description is thorough and organized (Yulia, Situmorang, & Pakpahan, 2024)

Future research should investigate the incorporation of digital technologies and artificial intelligence in the 4D model, building on the knowledge gathered from this study. This can improve and further customize ESP materials. It's also important to look at the model's cross-disciplinary applicability in industries like business, healthcare, and engineering. This would evaluate its efficacy and versatility across several ESP domains. Lastly, longitudinal research assessing the long-term effects of 4D-based ESP materials on students' professional communication abilities would yield insightful empirical data. This would improve the model's suitability for use in practical settings.

CONCLUSION

This study shows that 4D models can be used effectively to create teaching materials that are more contextual and appropriate to the specific needs of students. This discovery provides the basis for further research to explore the

integration of digital technologies in each stage of the 4D model, testing its effectiveness in various areas of ESP such as business, medicine.

In the long term, this research is expected to improve the quality of ESP learning for students by providing more contextual, relevant, and need-based material. By applying the 4D model, students are expected to be more involved in the learning process, improve their language skills, and be better prepared to face communication challenges in their professional field. This research provides a systematic framework for the development and evaluation of teaching materials for educators, helping them create materials that are more in line with changes in industry and technology. This research can also be used as a reference for education policies to encourage the development of a more research-based and dynamic ESP curriculum in the future.

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