



Developing English E-Module for Culinary Students at LPK Bali Crystal College

I Wayan Wira Praditya¹, I Gede Budasi², Dewa Putu Ramendra³

^{1,2,3}Pendidikan Bahasa Inggris, Program Pascasarjana
Universitas Pendidikan Ganesha, Bali

Article Info	Abstract
<p>Received: 2026-01-24 Revised: 2026-01-29 Accepted: 2026-02-10</p> <p>Keywords: <i>ESP</i> <i>Material Development</i> <i>Needs Analysis</i> <i>R&D</i></p> <p>DOI: 10.24256/ideas.v14i1.9382</p> <p>Corresponding Author: I Wayan Wira Praditya kewan.iwayan@gmail.com Pendidikan Bahasa Inggris, Program Pascasarjana Universitas Pendidikan Ganesha, Bali</p>	<p><i>Preliminary observations show that there is no standardized English for Specific Purposes (ESP) teaching materials for culinary students at LPK Bali Crystal College. This research aims to identify the English learning needs of culinary students, develop English for Culinary e-modules based on these needs and SKKNI, and assess the quality of the e-modules developed. This study uses a Research and Development (R&D) approach with an adaptation of the Borg and Gall (2003) model which includes the exploration, development, and validation stages, and refers to the principles of ESP material development from Hutchinson and Waters (1987). Data were collected through document analysis, interviews, and questionnaires involving 30 culinary students and 2 instructors, then analyzed qualitatively using Miles and Huberman (1994) and quantitatively with descriptive statistics according to Gravetter and Wallnau (2016). The results of the needs analysis show that students need authentic, contextual material with the world of culinary work, integrated with four language skills, interactive, and covering 12 topics of language functions relevant to professional kitchen activities. Based on these findings, an e-module was developed consisting of 12 chapters and equipped with text, images, audio, and video. The validation results showed that the quality of the media with a mean of 4.90 and 4.80 and the quality of the content with a mean of 4.88 and 4.94, all of which were in the very good category. Thus, the e-module developed is declared suitable for use as ESP teaching materials for culinary students at LPK Bali Crystal College.</i></p>

1. Introduction

English language skills are an essential competency for vocational learners to face the demands of communication in the increasingly specific and professional world of work. In this context, English for Specific Purposes (ESP) focuses on learning English that is tailored to the needs of a specific field of work and the use of language in real-life work situations (Sudipa et al., 2020). The ESP approach not only emphasizes general language mastery, but also the development of professional communication skills relevant to the demands of the industry as well as the work readiness of learners (Low, 2018). In Indonesia, ESP is widely applied in vocational education as an effort to improve students' English language skills in accordance with their field of expertise (Hamid et al., 2022).

In vocational education, the development of ESP is directed to be in line with the Indonesian National Work Competency Standards (SKKNI) as a reference for curriculum and learning development. SKKNI functions as a link between classroom learning and the needs of the world of work by emphasizing the mastery of four language skills, namely listening, speaking, reading, and writing, in a professional context (Pranesti et al., 2018). Through this framework, educators are expected to be able to provide learning that is relevant to industry competency standards. However, SKKNI does not provide ready-to-use teaching materials, so many teachers have difficulty integrating these standards into ESP learning systematically (Oroh et al., 2020). This condition causes the development of ESP material to often depend on the individual initiative of the teacher and is not completely based on the needs of learners (Apriyanti et al., 2021; Lapele, 2019).

In the culinary field, a number of studies show that ESP learning needs to reflect work practices in professional kitchens. English language materials for culinary students generally include technical vocabulary, cooking processes, kitchen utensils, occupational safety, as well as practical communication expressions used in the work environment (Khoirotun & Rohmah, 2024; Darwis et al., 2024). Other research also emphasizes the importance of an ESP approach that considers students' learning needs and the language demands of the industry to make learning more contextual and meaningful (Gufron & Nufus, 2023). However, most of these studies still focus on the development of printed materials or certain linguistic aspects, such as vocabulary, and have not fully integrated SKKNI as a national competency framework (Maula, 2021; Resaldi et al., 2025).

The results of initial observations at LPK Bali Crystal College (BCC) show that standardized ESP teaching materials are not yet available for culinary students. This condition makes it difficult for teachers to integrate SKKNI into English learning and causes learning not to fully reflect the needs of work communication in the culinary field. Although several studies have developed ESP materials for culinary students, there has been no research that comprehensively integrates needs analysis, SKKNI, and e-module design in the context of job training institutions (LPK). This gap is the main focus of this research.

To answer these problems, this study developed an English for Culinary e-module for culinary students at LPK Bali Crystal College. The e-module format was chosen because it allows for the presentation of authentic material supported by multimedia elements, such as images, audio, and video, and supports flexible, independent, and interactive learning (Clark & Mayer, 2016). This characteristic is considered appropriate for ESP learning which demands the integration of language skills and real work contexts. Therefore, this study aims to identify the English learning needs of culinary students, develop an English for Culinary e-module that is in line with SKKNI, and evaluate the quality of the e-module developed.

2. Method

Research Design

This study uses a Research and Development (R&D) approach by adapting the model of Borg and Gall (2003) which is limited to three main stages, namely exploration (needs analysis), development, and validation through expert judgment. The user trial stage (pilot testing or user judgment) was not carried out in this study due to the limited research time. The development of e-module materials refers to the principles of ESP development from Hutchinson and Waters (1987) which include input, content focus, language focus, vocabulary, and tasks to ensure the suitability of the material with the needs of vocational learners and work competency standards (SKKNI).

Participants

The research participants consisted of 30 culinary program students and 2 English instructors at LPK Bali Crystal College. The selection of students was carried out by purposive sampling, with the consideration that all participants were active students who were participating in competency-based training and needed English for the context of culinary work. The number of 30 participants is considered sufficient to describe the learning needs of ESP in the context of job training institutions (LPK). Two instructors were selected for their experience in teaching ESP as well as direct involvement in the implementation of SKKNI at the institution. And the experts consist of two on media expert and content experts. The use of two validators is considered adequate as it is a common practice in R&D research at the initial stage of product validation proposed by Borg and Gall (2003).

Instruments

The research instruments include: a) semi-structured interview guide adapting needs analysis components proposed by Barghamadi (2020) and Nurhana (2021). Below is the blueprint of the interview guide.

Table 1. The Blueprint of Interview Guide

Dimension	Indicators	Items	Number of Items
Students' Characteristics and Background	Students' Expectations	1	1
	Students' Motivation	2	1
	Students' Lack	3	1
	Students' Personal Information	4,5	2
Students' Language Information	Students' Language Information	6	1
Total			6 Items

Based on Table 1 the interview guide consists of 2 dimensions: *a) Students' Characterisitc and Background* (with the indicators: *Students' Expectations, Motivation, Lack, Information, Language Information*) and *b) Students' Language Information* (with the indicator: *Students' Language Information*). There is also close-ended questionnaire adapting Barghamadi (2020) and Nurhana (2021) of the needs analysis components and components of language functions proposed by Kusumaningsih et al. (2020). Below is the blueprint of questionnaire.

Table 2. Blueprint of Questionnaire

Dimensions	Indicators	Item Numbers	Numbers of Items
Students' Characteristics and Background	Students' lacks	1, 2, 3, 4, 5	5
	Students' motivation	5, 6, 7, 8,9	5
	Students' expectation	10, 11	2
	Students' professional information	12,13,14	3
	Students' personal information	15,16, 17	3
	Students' environment or situation	18, 19	2
Students' Language Information	Students' English proficiency	20, 21, 22	3
	Students' language learning information	23,24,25,26,27	5
	Students' learning objective	28	1
	Language functions	29, 30, 31, 32, 33, 34, 35	7
Total			35 Items

Based on Table 2 the blueprint of questionnaire comprises 2 dimensions: *Students' Characteristics and Background* (with indicator: *Students' lacks, motivation, expectation, professional information, personal information, environment or situation*) and *Language Information* (with the indicator: *Students' English proficiency, language learning information, learning objective*) and Language functions. The language function consisted of: a) *Giving instructions or commands*, b) *Describe cooking process or technique*, c) *Report progress*, d) *Requesting tools or ingredients*, e) *Checking understanding or clarification*, f) *Health and safety warning*, and g) *Expressing problems & giving suggestions*.

Expert Judgment assessment sheet to assess the quality of e-module content and media. The content expert judgment instrument was prepared adapting the criteria of good ESP material proposed by (Hutchinson & Waters, 1987). Below is the blueprint.

Table 3. Blueprint of Content Expert Judgment Sheet

Dimensions	Indicators	Number of Items	Total Items
Need-Based	Utilizing students' needs as a basis	1	1
Goal-Oriented	Concentrating on students' communicative results	2,3,4,5	4
Students-Centred	Promoting students' active engagement	6,7,8	3
Contextualized	Aligning with students' professional and academic environments	9,10	2
Authentic	Presenting practical tasks or challenges	11	1
Skills-Integrated	Comprising four language proficiency practices	12	1
Flexible/Adaptable	Allowing for contextual alteration	13	1
Accuracy	Supplying the materials with citations or references	14	1
Relevance	Supplying material relevant to the learning objectives	15	1
Organization	Organizing the educational resources from the simplest to the most complex level	16	1
Clarity and Readability	Employing lucid and succinct language	17	1
Total			17 Items

Based on Table 5 related to content expert judgment, there are 11 dimensions: *Need-Based, Goal-Oriented, Students-Centred, Contextualized, Authentic, Skills-Integrated, Flexible/Adaptable, Accuracy, Relevance, Organization*.

The media expert judgement follows criteria of good learning material content proposed by Ahmad & Brogan, (2016); Clark & Mayer (2016); Lynch & Horton (2008) and media expert judgment was adopted from Clark & Mayer (2016) and Lynch & Horton (2008). Below is the blueprint.

Table 4. Blueprint of Media Expert Judgement Sheet

Dimension	Indicators	Items	Number of Items
Multimedia	The harmonious integration of text and graphics enhances readers' comprehension of the situation.	1	1
Contiguity	Supplying text for each exhibited image	2	1
Modality	Utilizing images, audio, or narration to explain content	3	1
Redundancy	Eliminate excessive or lengthy texts devoid of substantive content.	4	1
Coherence	Ornamental components with explicit functions	5	1
Consistency	Ensuring a uniform layout, color scheme, and font without abrupt format alterations that may perplex readers.	6	1
Effective Typograph	Ensuring legible fonts that are intelligible and have strong contrast with the background	7,8	2
Use of White Space	Ensuring enough spacing around text and images	9	1
Clear Navigation	Offering straightforward navigation functionalities, like next and previous buttons, internal links, or a clickable table of contents.	10	1
Total			10 Items

Based on Table 6, the dimensions of the content expert judgment are divided into: *Multimedia, Contiguity, Modality, Redundancy, Coherence, Consistency, Effective Typograph, Use of White Space, Clear Navigation*.

Data Collection Procedures

The exploration stage begins with document analysis (syllabus and SKKNI), interviews with instructors, and distribution of questionnaires to students. The results of the needs analysis were used as the basis for determining topics of language function that are relevant to the context of culinary work. The development stage includes designing the e-module structure, developing

materials, and producing e-modules using the web version of Canva (Canva for Education) with the integration of text, images, audio, and video. The validation stage is carried out through the assessment of two experts, namely ESP material experts and learning media experts, to assess the feasibility and quality of the e-module before further use.

Data Analysis

Qualitative data were analyzed using qualitative descriptive techniques from Miles and Huberman (1994) through the process of data reduction, data presentation, and conclusion drawn. Quantitative data from expert assessments were analyzed using descriptive statistics (Gravetter & Wallnau, 2016) by calculating average scores.

The data of the needs analysis questionnaire uses a 5 level Likert scale to measure students' perceptions and needs. Each statement is given a score of 1 to 5, where the score is explained as follow:

Table 5. Likert-scale Indicator need analysis

Scale	Indicator
5	strongly agree
4	agree
3	neutral
2	disagree
1	strongly disagree

Based on Table 3 the Likert-scale Indicator comprise a score of 5 indicates strongly agree, a score of 4 agrees, a score of 3 is neutral, a score of 2 disagrees, and a score of 1 strongly disagrees. Based on the score acquired on each item then calculated using Gregory Formula. The first step in data analysis is to calculate the total score of each statement item by multiplying the number of respondents who chose each answer option by the corresponding Likert score. Furthermore, the mean score for each item is calculated by dividing the total score by the number of respondents. The formula used to calculate the mean value is as follows:

$$\text{Mean} = \frac{\sum(\text{Frequency} \times \text{Scale})}{30}$$

In this study, questionnaires were given to 30 students. Therefore, the maximum score that can be obtained for each statement item is 150 (30×5), while the minimum score is 30 (30×1). After the mean core is acquired, then it is interpreted using the criteria below.

Table 6. Criteria of Mean of Questionnaire

Score	Criteria
Mean ≥ 4.485	Very High/Very Needed
$3.49 \leq \text{Mean} < 4.485$	High/Required
$2.5 \leq \text{Mean} < 3.49$	Medium
$1.5 \leq \text{Mean} < 2.5$	Low
Mean < 1.5	Very Low

Based on Table 4, it can be explained as follows. The mean value of the questionnaire results was interpreted based on the interpretation criteria of the five-level Likert scale. The mean value range of 4.21–5.00 was categorized as very high, indicating that the assessed aspect was urgently needed or strongly perceived by the respondents. The mean value of 3.41–4.20 is in the high category, which indicates that this aspect is needed by the respondent. Furthermore, a mean value of 2.61–3.40 is classified as moderate, which indicates a sufficient level of need or perception. The mean value of 1.81–2.60 is in the low category, which indicates that this aspect is less needed or less felt. Meanwhile, the mean value of 1.00–1.80 falls into the very low category, which indicates that the aspect is hardly needed or very rarely felt by respondents.

Related to Expert Judgment, the 5 levels of Likert Scale are also used to measure the suitability of the e-modules that have been made with each criterion, such as the Blueprint Content Expert Judgment Sheet, and the Media Expert Judgement Sheet. The Likert-scale indicator is divided into 5 ranges which are described as follows.

Table 7. Likert-scale Indicator expert judgment

Scale	Indicator
5	strongly agree
4	agree
3	neutral
2	disagree
1	strongly disagree

Based on Table 7, the Likert Scale in content and media expert judgment used consists of a score of 5 indicating Strongly Agree, a score of 4 Agree, a score of 3 Neutral, a score of 2 Disagree, and a score of 1 Strongly Disagree. Based on the score obtained on each assessment item, the data is calculated using the Gregory Formula. The first step in data analysis is to calculate the total score of each statement item by multiplying the number of respondents (experts) who chose each answer option with the corresponding Likert score. Furthermore, the average score for each expert is calculated by dividing the total score by the number of points (17 points for content expert, and 10 points for media expert). The overall

average is then determined by flattening the average scores of all experts. The formula used to calculate the average value is as follows:

$$\text{Mean per Expert} = \frac{\text{Total Score of All Items}}{\text{Number of Items (17)}}$$

$$\text{Overall Mean} = \frac{\text{Mean of Expert 1} + \text{Mean of Expert 2} + \dots}{n}$$

where n is the number of experts.

After that, the mean score from media and expert judgment sheet categorized into several categories, such as:

Table 8. The Criteria of Expert Judgment

Score	Criteria
Mean ≥ 4.485	excellent materials
$3.49 \leq \text{Mean} < 4.485$	good materials
$2.5 \leq \text{Mean} < 3.49$	average materials
$1.5 \leq \text{Mean} < 2.5$	fair materials
Mean < 1.5	poor materials

Based on table 8 there are several criteria based on the mean score. Mean ≥ 4.485 categorized as excellent materials and materials have very superior and almost perfect quality and are declared very suitable for use without significant revisions. If the score is $3.49 \leq \text{Mean} < 4.485$ categorized as good materials with good quality materials that meet standards and are declared suitable for use, perhaps with minor revisions. If the mean score is $2.5 \leq \text{Mean} < 3.49$ then categorized as average materials and materials are at a sufficient level, revisions and improvements are required in several aspects before they can be used. And if the mean score is $1.5 \leq \text{Mean} < 2.5$ is categorized as fair materials and low-quality materials with many flaws, requiring major revisions or deep redesigns. And if the mean score is Mean < 1.5 then it is categorized as poor materials and materials do not meet the minimum standards. It is not worth using and should be redesigned from scratch.

All of the instrument above were tested by the experts before employed to collect data. This test is intended to assess instruments' validity and reliability. There are 2 experts assessing the validity of all research instruments. Then, the validated instrument undergone the reliability test. Therefore, the data from the validity and reliability test was gathered, the instruments were used to conduct data collection.

To ensure the reliability and consistency of the assessment between experts, inter-rater reliability is measured using the Intraclass Correlation Coefficient (ICC). The ICC was chosen because it is suitable for measuring

agreement between two or more raters on interval scale data. The calculation was carried out using SPSS statistical software, version 27, with the Two-Way Random Effects model and the Absolute Agreement type.

The ICC value interpretation criteria refer to Koo and Li (2016):

1. ICC < 0.50: Low reliability (poor)
2. $0.50 \leq \text{ICC} < 0.75$: Moderate reliability
3. $0.75 \leq \text{ICC} < 0.90$: Good reliability
4. ICC ≥ 0.90 : Excellent reliability

3. Result

Findings

A. The Needs Analysis

There are three different sources of data to gather the needs analysis of culinary students. They include document analysis, interview, and close-ended questionnaire. The findings can be shown as follows:

Table 9. Result of Document Analysis

Document Type	Findings
Syllabus	Language skills
	1. Reading
	2. Writing
	3. Listening
	4. Speaking
	Learning Topics
	1. Introduction to FBP
	2. Vegetable, Fruit, Meat Seasoning
	3. Cooking Method
	4. Cutting Method
	5. Kitchen Utensils
	6. Ingredients
	7. Cooking Procedures
	8. Coordinating with colleagues
	9. Describing Dishes
	10. Handling Complaints

Based on Table 1 the document found consists of the Syllabus used at LPK Bali Crystal College. The syllabus consists of English skills and English learning topics for culinary students. The English skills consisted of four English skills: reading, listening, writing, and speaking. There were 10 main topics covered

including: a) *Introduction to FBP*, b) *Vegetable, Fruit, Meat Seasoning*, c) *Cooking Method*, d) *Cutting Method*, e) *Kitchen Utensils*, f) *Ingredients*, g) *Cooking Procedures*, h) *Coordinating with colleagues*, i) *Describing Dishes*, and j) *Handling Complaints*.

Below the result of the interview. The interview guide was adapted from Barghamadi (2020) and Nuhana (2021). The result of the interview can be seen as follows.

Table 10. Result of Interview

Indicators	Instructor 1	Instructor 2
Students' Expectations	The students expect to have proficient English and be connected to the industry. And to have skills in reading, writing, listening, and speaking.	Students expect to have English for their technical skills: knowing kitchen sections, explaining cooking methods, explaining ingredients, and handling complaints.
Students' Motivation	Students are excited when the game is used during the learning process, and they are motivated to learn with videos.	The students are excited when property is used, such as the kitchen lab practices is used to explain kitchen sections
Students' Lack	The student lacked knowledge of culinary and did not know the vocabulary in the field. They also had fewer exercises in practicing English in a culinary context.	Students lacked the ability in use English in a culinary context.
Students' Personal Information	The students had not joined any ESP courses outside college	The students did not know anything about ESP courses outside college
Students' Language Information	The students had background working and training in the culinary department. Most of the students came from a vocational high school in the same department. Thus, they had the experience.	The students had knowledge of culinary arts based on their experience in their on-the-job training program in high school.
	The students' proficiency level is B1-intermediate, as most can handle daily activities. For instance, students can describe reasons why they chose the culinary department.	The students' level is A2-elementary. Most students can communicate in simple, routine tasks about culinary.

Based on Table 3 above, several aspects of the English learning situation for culinary students at BCC. The interpretation comprises

- a) Students' Expectations: Students expect English language learning that supports the mastery of the four language skills (reading, writing, listening, and speaking) as well as being relevant to culinary technical skills, such as getting to know the kitchen area, *explaining cooking methods and ingredients*, and *handling customer complaints* in an industry context.
- b) Students' Motivation: Students show high motivation to learn when learning using interactive media such as games, videos, as well as real properties through practice in the kitchen laboratory to explain the context of culinary work.
- c) Students' Lack: Students still experience limitations in the use of English in culinary contexts, especially the lack of mastery of culinary vocabulary and the lack of English language practice integrated with culinary activities.
- d) Students' Personal Information: Most students have never taken and have no knowledge of ESP courses outside of BCC, so the ESP learning they receive is entirely dependent on the programs provided by the institution.
- e) Students' Language Information: Students have a background and experience in the culinary field from previous education and training, with English language proficiency levels varying from A2 (elementary) to B1 (intermediate), where most are able to communicate simply to explaining culinary-related activities and reasons.

Based on the results of the interpretation of the interview data, it can be concluded that BCC students need English language learning that is oriented to the context of culinary work and supports the mastery of the four language skills in an integrated manner. Students show high motivation to learn when learning uses interactive media and real-life experiences through practice in the kitchen laboratory. However, students still face limitations in the use of English in culinary contexts, especially in the mastery of technical vocabulary and relevant language practice opportunities. In addition, most students do not have any experience or knowledge of ESP learning outside of the institution, so ESP learning is entirely dependent on the programs provided by the BCC.

Although students have a background and experience in the culinary field, their English language skills still vary at the A2 to B1 levels, which shows the need for the development of ESP materials that are structured, contextual, and appropriate to the needs and ability level of the students. In short, based on the interpretation, the materials needed by students were supposed to: *a) have tasks related to English used in a culinary context, b) have the four language skills activities (reading, writing, listening, speaking), c) have real, authentic material about culinary, d) have the language use in a culinary context, and e) provide interactive learning.*

Below the result questionnaire. The questionnaire was adapted from Barghamadi (2020) and Nuhana (2021) and following the language component used by culinary students which proposed by Kusumaningsih et al. (2020). The result of the questionnaire can be seen as follows.

Table 11. Result of Questionnaire

Dimensions	Indicators	Item Number	Scales				
			1	2	3	4	5
Students' Characteristics and Background	Students' Lacks	1	1	2	4	12	11
		2	0	3	5	11	11
		3	1	2	6	12	9
		4	2	3	5	11	9
		5	1	2	4	13	10
	Students' Motivation	6	2	4	6	10	8
		7	1	2	5	12	10
		8	2	3	6	11	8
		9	1	2	4	13	10
	Students' Expectation	10	0	2	5	12	11
		11	0	2	4	13	11
	Students' professional information	12	5	6	7	8	4
		13	3	5	7	9	6
		14	2	3	6	11	8
	Students' personal information	15	6	7	6	7	4
		16	3	4	6	10	7
		17	5	6	7	8	4
	Students' Environment or Situation	18	4	6	8	8	4
		19	1	2	5	12	10
Students' Information	Language Proficiency	20	0	2	4	12	12
		21	0	2	5	12	11
		22	1	2	5	12	10
	Language Learning	23	0	2	4	13	11
		24	0	2	5	12	11
		25	0	2	4	12	12
		26	1	2	5	12	10
		27	0	2	4	12	12
	Students' learning objective	28	0	2	5	12	11
	Language Functions	29	1	2	5	12	10
		30	0	2	4	13	11
		31	0	2	5	12	11

	32	0	2	4	12	12
	33	1	2	5	12	10
	34	0	2	4	12	12
	35	0	2	5	12	11

Based on Table 3. there is the questionnaire show several findings. Based on questionnaire data filled out by 30 BCC students, the following is a needs analysis for the development of ESP material in the culinary field. The Likert scale used is 1–5 with the interpretation: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. Mean dihitung dengan rumus:

$$\text{Mean} = \frac{\sum(\text{Frequency} \times \text{Scale})}{30}$$

And the result of the mean calculation for each statement is as follows:

Table 12. Result of Mean Calculation

Item No	Mean	Item No	Mean	Item No	Mean
1	4.00	13	3.33	25	4.13
2	4.00	14	3.67	26	3.93
3	3.87	15	2.87	27	4.13
4	3.73	16	3.47	28	4.07
5	3.97	17	3.00	29	3.93
6	3.60	18	3.07	30	4.10
7	3.93	19	3.93	31	4.07
8	3.67	20	4.13	32	4.13
9	3.97	21	4.07	33	3.93
10	4.07	22	3.93	34	4.13
11	4.10	23	4.10	35	4.07
12	3.00	24	4.07		

Based on Table 12 the result of mean calculation provides several information about the needs analysis which divided into 3 dimensions: *a) Students' Characteristics and Background*, and *b) Students' Language Information*.

a) Dimension Students' Characteristics and Background

- 1) **Indicator: Students' Lacks** (Statements 1-5) score **mean range: 3.73 - 4.00** which is **categorized as High/Required**. Students consistently report difficulties in various aspects of culinary English. The highest level of difficulty was in **using spoken/written English** (Mean 3.97). This demonstrates **the urgent need** for the development of material that targets practical communication skills.
- 2) **Indicator: Students' Motivation** (Statements 6-9) has mean score: **3.60 - 3.97** which is **categorized as High/Required**. Student motivation to learn is high, especially in group settings **and**

interactive activities (Mean 3.93 and 3.97). Motivation for independent learning was relatively lower (Mean 3.67). The implication is that the material must be designed with **a collaborative and engaging approach**.

- 3) **Indicator: Students' Expectation** (Statement 10-11) has mean score **4.07 and 4.10** which is **categorized as High/Required**. Students' expectations of improving English language skills for culinary careers **are very high**. This becomes **a strong foundation of motivation** and validation that the development of ESP material is highly relevant to their career goals.
- 4) **Indicator: Students' Professional Information** (Statements 12-14) has mean score **3.00 - 3.67** which is **categorized as Medium to High/Required**. In terms of Previous ESP course experience is categorized as **Medium** (Mean 3.00). In terms of Work experience/culinary training is categorized **Medium** (Mean 3.33). In terms of Previous culinary knowledge is categorized as **High/Required** (Mean 3.67). And the **Interpretation** is students have **an adequate culinary knowledge background**, but **formal experience with ESP is limited**. The material should **assume basic culinary knowledge** but **introduce ESP from a fundamental level**.
- 5) **Indicators: Students' Personal Information** (Statements 15-17) **has mean score 2.87 - 3.47** which is **categorized as Medium**. English family background is categorized **Medium** (Mean 2.87). In terms of Stay in tourist areas is categorized as **Medium** (Mean 3.47). In terms of Frequent interaction with foreigners is categorized as **Medium** (Mean 3.00). And the **interpretation** s exposure to English in students' daily lives **is quite limited**. Therefore, the material should **provide context and authentic language exposure** that they may not get in their environment.
- 6) **Indicators: Students' Environment/Situation** (Statements 18-19) **has mean score 3.07 and 3.93** which is **categorized as Medium and High/Required**. In terms of English-rich learning environment is categorized as **Medium** (Mean 3.07). In terms of Professional demands for English language proficiency is categorized as **High/Required** (Mean 3.93). And the **interpretation** is although the learning environment is not supportive, **awareness of the demands of the world of work is very high**. The material must **explicitly link learning to competencies needed in the workplace**.

b) Dimension Students' Language Information

- 1) Indicator: English Proficiency (Statements 20-22) has mean score 3.93 - 4.13 which is categorized as High/Required. Students are well aware of the limitations of their English language skills. In terms of Vocabulary mastery is categorized as High/Required (Mean 4.13). In terms of Receptive skills (listening & reading) is categorized as High/Required (Mean 4.07). In terms of Productive skills (writing & speaking) is categorized as High/Required (Mean 3.93). And the interpretation is the development of culinary vocabulary is the most critical need, followed by the development of listening and reading skills.
- 2) Indicators: Language Learning (Statements 23-27) has mean score 3.93 - 4.13 which is categorized as High/Required. Students' preferences and needs for learning materials show a very high consistency. In terms of Audio-visual learning is categorized as High/Required (Mean 4.10), Visual learning with images: High/Required (Mean 4.07), Flexible module requirements (accessible anytime/anywhere): High/Required (Mean 4.13), Clear instruction needs: High/Required (Mean 3.93), Real-world problem-based task requirements: High/Required (Mean 4.13). And the interpretation is students want material that is multimodal, flexible, authentic, and well-structured. It provides specific guidance for the format of the e-module.
- 3) Indicators: Learning Objective (Statement 28) has mean score 4.07 which is categorized as High/Required. Learning objectives for effective career communication are essential for students. This is in line with the ESP principles that focus on professional communication.
- 4) Indicators: Language Functions (Statements 29-35) has mean score 3.93 - 4.13 which is categorized as High/Required. All culinary language functions tested are considered indispensable, with the highest need at: Requesting tool or ingredients: High/Required (Mean 4.13), Convey safety warning: High/Required (Mean 4.13), Describe the cooking process: High/Required (Mean 4.10). And the interpretation is the 7 language function topics developed in the e-module are strongly validated by student needs data. This is the core of the curriculum that must be developed.

Based on the result of questionnaire, the needs analysis comprises of several things. Urgent and Focused Needs: This analysis reveals a very specific and high need for culinary ESP materials. Students not only need general English, but specific language functions that are directly applied in culinary contexts. E-Module

Design Validation: The characteristics of the developed e-module—need-based, contextual, interactive, multimodal, and flexible—appropriately respond to the questionnaire's findings. This data provides a strong empirical foundation for every design decision. **Content Priority:** The development of culinary vocabulary and practical language functions (such as instructing, requesting ingredients, and safety warnings) should be a top priority, followed by integrating all four language skills. **Learning Strategies:** Given the higher motivation in collaborative and interactive settings, e-modules should include a lot of fun group activities, projects, and simulations, rather than just individual exercises. Also, 7 language functions are used in culinary departments including *a) Giving instructions or commands, b) Describe cooking process or technique, c) Report progress, e) Requesting tools or ingredients, f) Checking understanding or clarification, g) Health and safety warning, and h) Expressing problems & giving suggestions.*

B. The Development of the E-module

In developing the e-module, the theory of research development by Borg and Gall (2003) is adapted. In the development stage, there step consist of a) deciding the topics, b) preparing the material, and c) developing the draft of e-module and d) revision.

1) Deciding Topics

The topics for the e-module were systematically derived from a triangulation of needs analysis data.

From the documents analysis consist of 9 core topics from the SKKNI-based curriculum namely:

1. *Introduction to FBP*
2. *Vegetable, Fruit, Meat Seasoning*
3. *Cooking Method*
4. *Cutting Method*
5. *Kitchen Utensils*
6. *Ingredients*
7. *Cooking Procedures*
8. *Coordinating with colleagues*
9. *Describing Dishes*
10. *Handling Complaints*

From the interview guide the result shows student needs for materials namely:

1. Authentic materials
2. Materials integrated with four language skills (reading, writing, listening, speaking)
3. Material that related to culinary context

4. An interactive material

From the finding of the questionnaire, the result showed that the topic needed by the students are:

1. *Giving instructions or commands*
2. *Describe cooking process or technique*
3. *Report progress*
4. *Requesting tools or ingredients*
5. *Checking understanding or clarification*
6. *Health and safety warning*
7. *Expressing problems & giving suggestions.*
- 8.

The finding from document analysis, interview, and questionnaire then synthesized and chosen to be the name of the Chapters, which is displayed as follows:

Table 13. Mapping of the Chapter

No.	Name of Chapter	Type of Findings	
		Syllabus	Questionnaire
1	<i>Chapter I: Greeting and Introduction</i>	<i>Introduction to Food and Beverage Production</i>	
2	<i>Chapter II: Describing Kitchen Utensils</i>	<i>Telling About Kitchen Utensils and Tools</i>	<i>Requesting Tool or Ingredients</i>
3	<i>Chapter III: Requesting for Ingredients</i>		<i>Requesting Tool or Ingredients</i>
4	<i>Chapter IV: Describing Cutting Method</i>	<i>Describing Cutting Method</i>	
5	<i>Chapter V: Explaining Cooking Method</i>	<i>Explaining Cooking Method</i>	<i>Describe Cooking Process or Technique</i>
6	<i>Chapter VI: Giving Instruction and Commands</i>		<i>Giving instructions or commands</i>
7	<i>Chapter VII: Checking Understanding</i>		<i>Checking understanding or clarification</i>
8	<i>Chapter VIII: Describing a Dish</i>	<i>Describing Dishes</i>	
9	<i>Chapter IX: Telling Food Safety</i>		<i>Health and safety warning</i>
10	<i>Chapter X: Reporting Progress</i>		<i>Report progress</i>
11	<i>Chapter XI: Giving Asking Suggestion</i>		<i>Expressing problems &</i>

					<i>giving suggestions</i>
12	Chapter	XII:	Handling	Handling	
	Complaints			Complaints	

Table 13 show the mapping of the chapter following the findings. From that 12 coherent chapters were formulated: a) Chapter I: Greeting and Introduction, b) Chapter II: Describing Kitchen Utensils, c) Chapter III: Requesting for Ingredients, d) Chapter IV: Describing Cutting Method, e) Chapter V: Explaining Cooking Method, f) Chapter VI: Giving Instruction and Commands, g) Chapter VII: Checking Understanding, h) Chapter VIII: Describing a Dish, i) Chapter IX: Telling Food Safety, j) Chapter X: Reporting Progress, k) Chapter XI: Giving Asking Suggestion, l) Chapter XII: Handling Complaints.

2) Preparing Material

To create an engaging and authentic learning experience, diverse multimedia supporting materials were curated for each of the 12 chapters. Images are used in every chapter for observation, discussion, and context. Audio files are incorporated for listening comprehension activities. Videos are linked to demonstrate processes and real-world dialogues. The example is displayed below:

BRAINSTORMING I
Observe the following pictures of a chef and colleagues. And identify what activity they probably do?



Source: freemix.com

Category	Examples
Can	<ul style="list-style-type: none"> "Can you pass me the salt, please?" "Can I have some sugar for the dessert?" "Can you bring the onions to my station?"
Could	<ul style="list-style-type: none"> "Could you get the olive oil from the storage?" "Could I have some fresh tomatoes, please?" "Could you prepare 200 grams of flour?"
May	<ul style="list-style-type: none"> "May I have some fresh basil, please?" "May I get more cream for the recipe?" "May I use the chicken stock?"

For more insight about the material above, you can access

A.1 Let's do a practice!

Fill in each blank with can, could, may, or would:

Figure 1. Example use of picture

Figure 2. Example use of Video

Line Cook: "Sure, Chef. Here it is."
Chef: "..... some fresh basil for the garnish?"
Line Cook: "Certainly, Chef. I'll bring it right away."
Chef: "..... 3 eggs for the omelet?"
Line Cook: "Yes, Chef. Here they are."

TASK 3
Listen to the audio below and answer the following question!

1. What ingredient does the chef ask for to chop?

2. Which action does the chef say they should do before frying the vegetables?

3. What cooking step does the chef ask if they could start while waiting for the water to boil?

4. What does the cook say they can use to stir the soup?

5. Which task does the chef say they must finish before serving the dish?

Figure 3. Example use of audio

Figures 1, 2, 3 show the use of media in the e-module. Figure 1 show the use of picture in the brainstorming section, Figure 2 show the use of video in the grammar section, and Figure 3 show the use of audio in task 3.

3) Developing Draft

The e-module was developed in Canva, following to Hutchinson and Waters' (1987) ESP development model which is explained as follows. Input: Features two brainstorming sections with trigger pictures and dialogues to activate prior

knowledge. Content Focus: Presents core culinary knowledge and terminology related to the chapter topic. Language Focus which is divided into: Grammar: Explanations and controlled exercises (e.g., fill-in-the-blank) and Language Function & Expression: Key phrases and exercises for formulating context-specific conversations. Vocabulary: A dedicated list of terms with definitions. Task: A series of 5 progressive activities to assess comprehension and application (Task 1: Multiple-choice questions, Task 2: Fill-in-the-blank exercises, Task 3: Listening comprehension activities, Task 4: Application exercises (e.g., interviews, role-plays), Task 5: Productive conversation building.) The development process comprises several steps, as follows;

- a) The design start with the cover of the module.

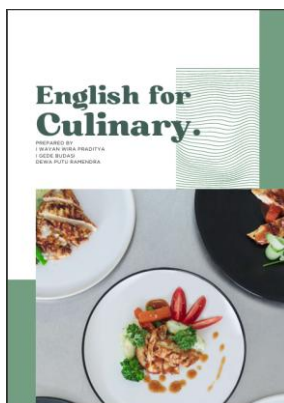


Figure 1. Cover of the e-module.

Based on Figure 1 above the cover comprise of the title of the e-module, “English for Culinary” and followed with the authors’ name, and representative picture of dishes. After that the design continues with the *Preface and Tables of content* which is presented as follows:

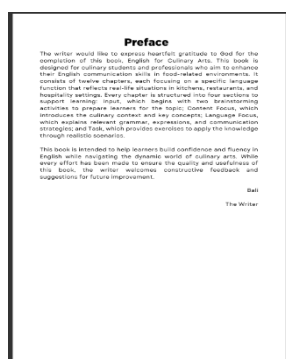


Figure 2. Preface

TABLE OF CONTENT	
PREFACE.....	1
TABLE OF CONTENT.....	2
CHAPTER I GREETING & INTRODUCTION.....	3
CHAPTER II TELLING ABOUT KITCHEN UTENSILS AND TOOLS.....	14
CHAPTER III REQUESTING FOR INGREDIENTS.....	25
CHAPTER IV DESCRIBING ABOUT CUTTING METHOD.....	38
CHAPTER V EXPLAINING COOKING METHOD.....	51
CHAPTER VI GIVING INSTRUCTIONS AND COMMANDS.....	64
CHAPTER VII CHECKING UNDERSTANDING AND CLARIFICATION.....	78
CHAPTER VIII DESCRIBING A DISH.....	89
CHAPTER IX TELLING FOOD SAFETY.....	103
CHAPTER X REPORTING PROGRESS.....	116
CHAPTER XI GIVING OR ASKING SUGGESTION.....	129
CHAPTER XII HANDLING COMPLAINTS.....	142
AUTOBIOGRAPHY.....	154

Figure 3. Table of Content

Based on Figure 2 the *Preface* consists writer salutation and gratitude after finishing the e-module. And Figure 3 consists of the information of the pages for each chapter of the e-module. After that, in each chapter there is the cover of the chapter.

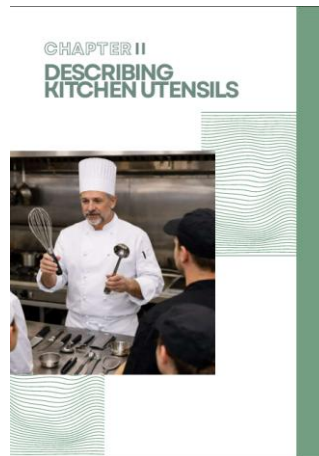


Figure 4. Cover of Chapter II

Figure 4 shows the cover of the chapter II which entitled *Describing Kitchen Utensils*. In each chapter started with the cover to provide the sign for students of the upcoming topic in the chapter. The next design is the *Input* which consists of brainstorming 1 and 2 which is presented as follows:

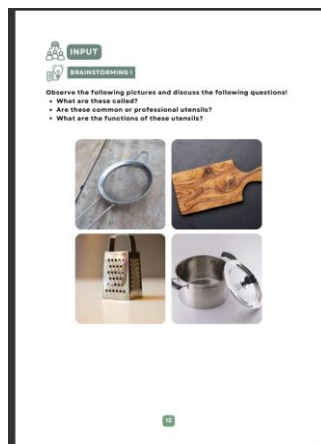


Figure 5. Brainstorming 1



Figure 6. Brainstorming 2

Figure 5 shows the *Input* section which comprises *Brainstorming 1* that has stimulus picture of the topic and follow up questions. Figure 6 shows the *Brainstorming 2* comprising Conversation and students have to read and compare the content. There are 3 conversations in each *Brainstorming 2*. After that, the design carried out by the *Content Focus* and *Language Focus* section which is displayed below:

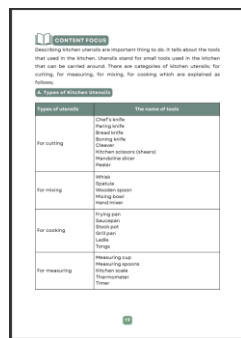


Figure 7. Content Focus

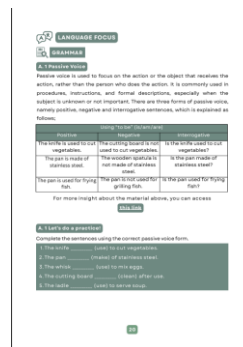


Figure 8. Grammar

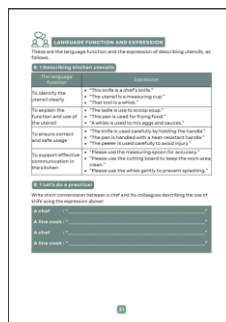


Figure 9. Language Function and Expression

Figure 7 shows the *Content Focus* section which comprise the knowledge of culinary department. Figure 8 and 9 show the *Language Focus* section. Figure 8 shows the grammar section and figure 9 shows the language function and expression. The next development step is the developing *Vocabulary* section and *Task* section which is explained as follows:



Figure 10. Vocabulary



Figure 11. Task 1, 2

Task 3
Listen to the audio below and answer the following questions!

True or False?

1. Which kitchen utensil is used to cut vegetables?
2. Which utensil is used to stir or mix food?
3. Which tool is used to measure ingredients in the kitchen?
4. Which utensil is used to fry food?
5. Which kitchen utensil is used to serve soup or liquid food?

Task 4
Find a partner and do a short interview about describing kitchen utensils using the following interview guide. Do it after one another!

Question	Answer
What is the name of the utensil?	
What is the utensil used for?	
What is the utensil made of?	
Is the utensil safe to use? Why?	
How should the utensil be used correctly?	

Task 5
Find a partner to have a short conversation about describing kitchen utensils in the kitchen. Please include the utensil's function and safe usage. Use positive voice. Break a leg!

Figure 12. Task 3, 4, 5

Figure 10 shows *Vocabulary* section in each e-module and component of *Vocabulary* consists of the word, IPA symbol and, and the meaning. Figure 11 shows *Task 1* which consists of multiple-choice question, and *Task 2* which consisted fill-in-the-blank. Figure 12 shows *Task 3* consists of audio and the follow up questions. *Task 4* consist of role-play which students have to complete based on the given instructions. *Task 5* consist of instructions for students to make conversation.

In terms of media implementation, in each chapter there is pictures imbedded to support the chapter's topic. For example, the pictures were imbedded in the Cover as the representation of the upcoming topic discussed in the chapter. The pictures also included in the *Input* section indicating the chapters' topic. Also, in each chapter there is audio in *Grammar* section giving students broader explanation of the grammar aspects in the discussed in the chapter. This also applies to *Task 3* which consist of audio from online sources for the listening comprehension test.

4) Revision

Upon completion of the product draft, it is given to the supervisor for preliminary evaluation to pinpoint issues for modification. The issue found of the use of white space, because there is a big gap in Chapter 4 between the *Grammar* section and the *Practice*.

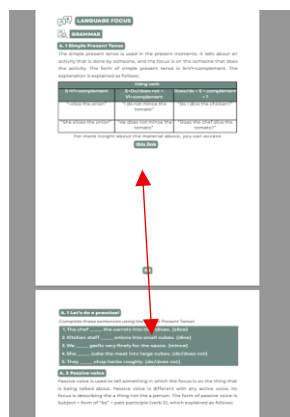


Figure 13. Issue of white space

Figure 13 shows the issue found in the e-module draft. The issue is there is a big gap between explanation of *Grammar* and the corresponding practice for it. Therefore, the e-module is revised based on the input from the supervisor.

C. The validity of E-Module

In assessing the quality of developed product, the expert judgement was conducted. There are two types of expert judgment, namely media expert judgment and content expert judgment. Below is the media expert judgment result. The media expert judgement sheet was adapted from display (Clark & Mayer, 2016; Lynch & Horton, 2008). The table can be seen as follows.

Table 4. The Media Quality

Dimensions	Item Number	Media Expert 1	Media Expert 2
Multimedia	1	5	5
Contiguity	2	5	5
Modality	3	5	5
Redundancy	4	5	5
Coherence	5	5	5
Consistency	6	5	5
Effective Typograph	7	5	4
	8	4	5
Use of White Space	9	5	4
Clear Navigation	10	5	5
Total		49	48
Mean (Total Score/Total Item)		4.90	4.80

Table 4 shows the scores from two media experts' judgments for the materials developed in the e-module. The scores were 49 (mean = 4.90) and 48 (mean = 4.80). Those results were classified according to several criteria, as shown below.

Mean ≥ 4.485 = excellent materials

$3.49 \leq \text{Mean} < 4.485$ = good materials

$2.5 \leq \text{Mean} < 3.49$ = average materials

$1.5 \leq \text{Mean} < 2.5$ = fair materials

Mean < 1.5 = poor materials

According to the criteria, the average ratings from media expert evaluations (4.90 and 4.85) exceeded 4.485. The English for culinary elements, presented as an e-module, received a good rating which can be categorized as excellent materials. The outcome of the assessment by content experts is presented below.

The content expert judgement sheet was adapted from several experts Ahmad & Brogan (2016; Clark & Mayer, (2016; Lynch & Horton (2008). The table can be seen as follows.

Table 5. The Content Quality

Dimensions	Item Number	Content Expert 1	Content Expert 2
Need-Based	1	5	5
Goal-Oriented	2	5	5
	3	5	5
	4	5	5
	5	5	5
Students-Centred	6	5	5
	7	5	5
	8	5	5
Contextualized	9	5	5
	10	5	5
Authentic	11	4	5
Skills-Integrated	12	5	5
Flexible/Adaptable	13	5	5
Accuracy	14	5	5
Relevance	15	5	5
Organization	16	4	4
Clarity and Readability	17	5	5
Total		83	84
Mean (Total Score/Total Item)		4.88	4.94

Table 5. shows the scores from two content experts' judgments for the materials developed in the e-module. The scores were 83 (mean = 4.88) and 84 (mean = 4.94). Those results were classified according to several criteria, as shown below.

Mean ≥ 4.485 = excellent materials

$3.49 \leq \text{Mean} < 4.485$ = good materials

$2.5 \leq \text{Mean} < 3.49$ = average materials

$1.5 \leq \text{Mean} < 2.5$ = fair materials

Mean < 1.5 = poor materials

Based on the criteria, the mean scores from content expert judgements (4.88 and 4.95) were higher than ≥ 4.485 . It indicated that the materials of English for culinary developed in the form of an e-module were categorized as excellent materials.

Prior to analyzing the quality ratings themselves, the consistency between expert raters was examined. The inter-rater reliability analysis yielded the following results:

Table 6. Inter-Rater Reliability Analysis Results

Expert Group	Number of Items	Percentage Agreement	ICC Value	95% Confidence Interval	Interpretation
Media Experts	10	70%	0.73	[0.12, 0.93]	Moderate reliability
Content Experts	17	94.12%	0.94	[0.85, 0.98]	Excellent reliability

Based on Table 6, the analysis of inter-rater reliability measurements shows several results. In terms of content expert judgment sheet, the ICC (Intraclass Correlation) value scores are ICC = 0.94. And the agreement is 94.12% which shows that the high level of reliability. This shows that both experts used almost the same standards to judge the quality of the e-module content. This suggests that there are clear and equally understood criteria for expert judgment.

In contrast, media experts' judgment sheet has score ICC = 0.73. And the agreement is 70%. This indicates the expert judgment sheet has moderate reliability. The items 7, 8, and 9 show different scores. These indicate slight subjective differences in assessing particular design features, rather than a fundamental disagreement over overall quality. Both media experts independently assigned the e-module overall scores of "excellent" (means of 4.90 and 4.80).

4. Discussion

The results of this study show that the development of ESP e-modules for culinary combining the principles of needs analysis with SKKNI. The high level of validity of the content experts (mean 4.88 and 4.94) proves that the material developed not only meets the standards of the curriculum, but is also relevant to the authentic context of the culinary context. This is in line with the opinion of Hutchinson & Waters (1987) who emphasized that ESP material should be based on real needs and integrated with specific fields, and supported by the initial finding that previous learning had not touched on the practical-language aspect in a structured way.

The development process adapts the R&D model of Borg & Gall (2003) and the principles of multimedia learning of Mayer (2009), resulting in an e-module that is interactive, easy to navigate, and focused on four language skills. These findings make a practical contribution to ESP teachers in vocational settings, particularly in providing adaptive digital teaching materials, while also opening up further development space such as the addition of audio-based exercises and

interactive simulations to improve speaking and listening skills in a professional environment.

In contrast to previous studies that focused on printed materials or isolated linguistic aspects such as vocabulary (Maula, 2021; Resaldi et al., 2025), this e-module comprehensively integrates four language skills with twelve contextual language functions directly related to professional kitchen activities. The high level of inter-rater reliability (ICC = 0.94) among content experts underscores the clarity and appropriateness of the ESP development criteria of Hutchinson and Waters (1987) applied. Second, high media quality validates the application of multimedia learning principles (Clark & Mayer, 2016).

The integration of images, audio, and video in Canva's directly responds to students' preferences for audio-visual, flexible, and authentic learning resources. Moderate reliability (ICC = 0.73) among media experts on specific design items (e.g., typography, white space) reflects the subjective nature of aesthetic assessments, but does not reduce consensus on overall excellence.

The module structure—with its consistent layout, clear navigation, and the principle of contiguity between text and graphics—effectively supports cognitive processing, making complex culinary English more accessible. This study answers the gaps identified in the introduction: the absence of ESP materials that integrate SKKNI, needs analysis, and comprehensive e-module design in the context of LPK. While studies such as Khoirotun & Rohmah (2024) and Gufron & Nufus (2023) emphasize contextual learning and authentic materials, their focus is often still on conventional tools.

This study advances the field by showing how SKKNI can be operationalized into an attractive digital learning resource. The developed e-modules go beyond the mere function of vocabulary banks or dialogues; It is a structured pedagogical tool that guides learning from content input and focus to language application through progressive tasks. This responds to the criticism of Apriyanti et al. (2021) and Lapele (2019) that the development of ESP often depends on individual teacher initiatives and is less systematic.

5. Conclusion

In short, there are several things can be concluded. Students need analysis shows that the material is authentic, relevant to culinary learning, includes language skills (reading, writing, listening, and speaking), and has culinary-related language functions. Twelve chapters were established in the form of e-module. In each chapter the structure composed following Hutchinson and Waters (1987)'s criteria for appropriate ESP material which consist of *Input*, *Content*, *Language*, *Vocabulary*, and *Tasks*. Each chapter includes photos, audio, and video. From the expert judgement, the product is categorized as good material.

Two media experts scored 49 (mean = 4.90) and 48 (mean = 4.80), whereas two content experts scored 83 (mean = 4.88) and 84 (mean = 4.94). All materials have average scores above > 4.485, indicating excellent quality. These results reveal that the e-module is strong in terms of the content, material relevance, fit to students' needs, appearance, navigation, and technical aspects media. The tool is also suitable for teaching ESP to Bali Crystal College culinary students. For the further research it is suggested that to conduct similar research on the products that have been developed, for example, by adding audio features to the vocabulary section.

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