



The impact of English for maritime textbooks on students' language skills: Reading, Writing, Listening, and Speaking

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Abstract

The problem of this research is how to overcome the need for Maritime English textbooks that integrate English language skills (reading, writing, speaking and listening). This research aims to develop a valid, practical and effective English textbook to improve students' understanding of English in the maritime field. The research design uses the Research and Development (R&D) method. This research was conducted at the Banyuwangi Maritime Academy's Commercial and Port Shipping Management Study Program (KPNK). Data collection was carried out through documentation techniques, Focus Group Discussions, questionnaires, and administering tests. The instruments used include documentation sheets, validation, questionnaires and self-evaluation. Data analysis focuses on the validity, practicality, and effectiveness of textbooks with the parameters (1) level of validity, (2) level of practicality, and (3) level of effectiveness. The results of the research show the need for continuous development of textbooks with an appropriate and effective CIRC (Cooperative Integrated Reading and Composition) Learning-Based learning model to meet student needs and educational development. Research reveals that textbooks meet design, validity, and effectiveness criteria. The research results show the need for continuous development of appropriate and effective textbooks to meet student needs and educational development.

Keywords: impact , english , maritime textbooks , students' language skills

Introduction

Maritime English is an international language that contains certain vocabulary and terms related to the maritime field and is very necessary for seafarers and port agents . English as a unifying language makes it easier for seafarers who come from different countries with different native languages to communicate (Amalia, et al., 2020; Wahyu, 2022). Smooth communication is very necessary to maintain the safety of ships, crew and shipping lines as well as the smooth running of shipping business. For this reason, several shipping/maritime colleges in Indonesia offer training or education related to the special skills of a ship officer or sailor. Educational institutions also provide prospective ship officers with foreign language skills, especially English, which can later be used in the world of work (Marselia & Etik, 2021; Nurdiansyah, 2018; Nurdiansyah, 2018; Sirbu & Alibec, 2023; Devi, & Rifai, 2022) .

Maritime cadets require the achievement of competency in using ME (Maritime English) because efficiency in English is a prerequisite for the Standards for Training, Certification and Watchkeeping (STCW) code, the 2010 Manila Amendments and SOLAS (Safety of Life at Sea) regulations (Wanga, 2015; Zhang & Cole, 2018). Lack of English language skills causes miscommunication which often results in maritime accidents, as well as endangering life safety and security at sea. English language skills are emphasized to be mastered by students because when they enter the world of work it will be closely related to



English, especially in the maritime sector on an international scale. English is a subject that must be mastered by students which includes four competencies, namely reading, writing, listening and speaking (Noviaty, et al., 2022; Sulistyaningsih & Ardianingsih, 2023; Frans, 2017).

As an effort to achieve the objectives of implementing Maritime English teaching and learning activities at the Banyuwangi Maritime Academy, several appropriate learning documents are needed, one of which is providing appropriate textbooks that meet the needs of students. In teaching and learning activities the role of textbooks is very important. Using appropriate textbooks can change the role of an educator from a teacher to a facilitator, and effective and interactive learning can be realized. For students, textbooks can help them to become independent learners and can be used to measure the competencies they have mastered (Wahono, 2022; Susila & Qosim, 2022; Makrifah, & Widiarini, 2019; Mudofir, 2016). Student dependence on lecturers is still very high, especially in relation to learning material. Lecturers still play a role as the main learning source. Therefore, appropriate textbooks need to be designed and developed to make it easier for students to understand maritime English lecture material. The textbook can then be used as a guide in the teaching and learning process by lecturers and students.

Apart from that, the development of maritime English textbooks that are oriented towards the potential of English in the world of maritime work can also contribute to improving student learning outcomes, especially in reading, writing, speaking and listening skills. Textbooks that are relevant and in line with current developments and student characteristics can achieve the desired learning outcomes. Previous research has been carried out using approaches such as Cooperative Integrated Reading and Composition (CIRC) in developing English textbooks. This research will develop a maritime English-oriented textbook using the ADDIE model in the development process (Sutrisna, 2021; Christina & Kristin, 2016; Setiawati & Sani, 2023; Maesaroh & Suprihatin, 2023).

Other words, through the development of maritime English textbooks that are oriented towards English language skills, it is hoped that students will be able to master effective communication skills in a maritime context. They will be able to understand special maritime terminology, interact professionally with international colleagues, and follow the latest developments in the global maritime industry (Marsuki, 2015; Nurhayati, 2020; Saifudin & Mubarak, 2020; Saifudin, 2018). This textbook is also designed to improve listening, speaking, reading and writing skills, so that students can compete at national and international levels. In general, the presence of this maritime English language textbook encourages innovative and effective learning accompanied by a competency-based approach that is relevant to the needs of the maritime industry (Febrianto & Puspitaningsih, 2020; Saleh, 2021).

Therefore, based on the phenomenon as described above, this research was carried out to develop an English textbook. This study is considered important because there is an urgent need for education stakeholders, lecturers, teachers, students and the world of education to have this textbook as a source of learning material to create an effective learning atmosphere in this millennial education era. In conclusion, the development of maritime English textbooks that are oriented towards English language skills (Reading, Writing, Speaking and Listening) in higher education is very important in responding to current developments and improving student learning outcomes. This textbook is expected to develop students' abilities to communicate effectively in an international maritime context. follow technological developments and regulations in the maritime industry. In addition, they are also expected to be able to compete in the global job market with sufficient language skills to work on international ships and multinational maritime companies.



Research methods

This research was designed using the Research and Development (R&D) method. In general, the R&D method aims to develop or create products and test their effectiveness (Cohen et al., 2018; Gustiani, 2019; Zakariah et al., 2020; Hanafi, 2017). In this research, the product developed is Maritime English teaching materials which focus on English language skills (Reading, Writing, Speaking and Listening) at the Banyuwangi Maritime Academy. To ensure the design, validity and effectiveness of this teaching material, researchers used the ADDIE development model designed by Dick and Carey.

This model was chosen because of its ease of application in a curriculum that teaches knowledge, skills and attitudes (Cheung, 2016; Haryanti & Saputro, 2016). This is also supported by previous research which states that the ADDIE model is the most logical and comprehensive for developing various products such as models, learning strategies, learning methods, media and teaching materials (Cheung, 2016; Supriyatno et al., 2020). Another reason to choose this model is its ability to adapt to various conditions, high flexibility, and a structured framework with evaluation and revision at each stage. The ADDIE model includes five stages: analysis, design, development, implementation, and evaluation (Haryanti & Saputro, 2016; Supriyatno et al., 2020). This research was conducted at the Banyuwangi Maritime Academy's Commercial and Port Shipping Management Study Program (KPNK). The research subjects involved 2 validators, 2 material experts, 2 textbook design experts to assess product validity, 2 accompanying lecturers for Indonesian language courses, and 10 semester students to assess the practicality and effectiveness of the textbooks being developed.

Data collection in this research was carried out using various techniques in accordance with data needs and research objectives. The techniques used include documentation, Focus Group Discussion (FGD), questionnaires and tests. The data collection instrument was designed to assess the quality of Maritime English textbooks, consisting of documentation sheets, validation, questionnaires and self-evaluation. The data collected was then analyzed based on research problems, namely (1) design, (2) level of validity, and (3) level of effectiveness of the textbook being developed.

Results

a. Results of Textbook Validation by Experts

To produce a good textbook product, the researcher handed over the textbook product and assessment format developed in accordance with *English for Maritime's English language skills* to experts. The assessment of the English course textbook *English for Maritimes* was carried out by 2 (two) teams of experts in their fields. There are 2 types of textbook assessment carried out by experts, namely; 1) assessment of textbook products from the aspect of English language skills, *English for Maritime Rhythm*, namely; *reading, writing, listening* and *speaking*, 2) assessment of textbook products from the appearance aspect, presentation aspect, material aspect and language aspect. Because the assessments of both experts were the same, the calculation analysis was only carried out once.

Table 1 Results of English Language Ability Scores *English for Maritime* By Expert

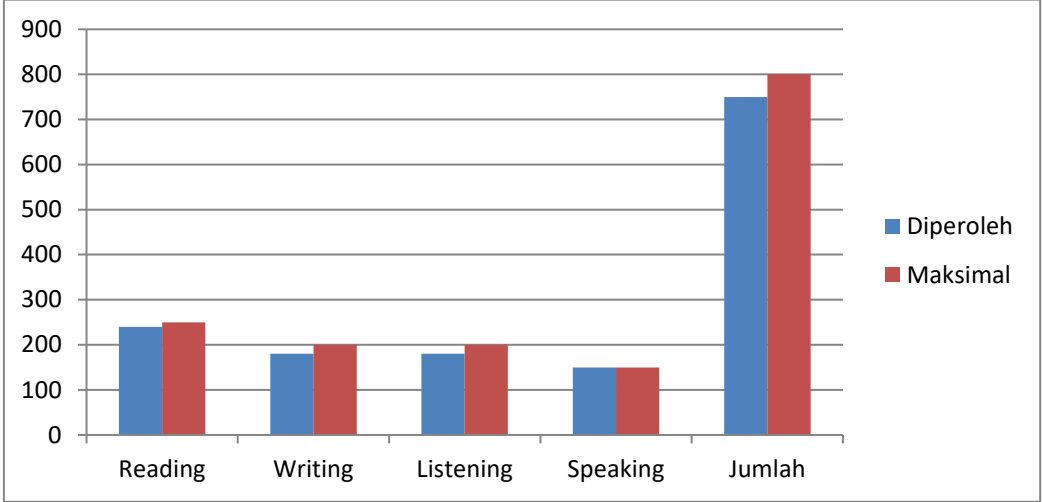
Mark	Reading	Writing	Listening	Speaking	Number of Values
Obtained	240	180	180	150	750
Maximum	250	200	200	150	800

Next, after getting the average value of these values, the researcher continued calculating validation from experts. Expert validation results are calculated using the formula:



$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$
$$V_{ah} = \frac{750}{800} \times 100 \%$$
$$V_{ah} = 93,75 \%$$

From tables and calculation results The above can be illustrated through the following graph:



Graph 1 Textbook Expert Validation Results

After obtaining the calculation results with a value of 93.75 , the researcher consulted table 3.12 product validity level conversion. Based on the calculation results, the value of 93.75% is in the range 86-100%. Thus, the validity of the product in terms of English language skills is very good or very valid and can be used without improvement.

b. Expert Assessment 1 Textbook Aspects of Appearance, Presentation, Material and Language

Apart from doing assessment in terms of English language skills *English for Maritime* Experts or experts also assess textbooks on the appearance aspect , presentation aspect , material aspect and language aspect .

Aspects of the appearance of textbooks that are assessed include 5 things, namely 1) the attractiveness of the cover design for student learning motivation, 2) consistent textbook design on each page, 3) learning designed to be student-centered (*Students Centered Learning*), 4) readability of the typeface used to make it easier for students to read, and 5) image layout, text regularity and harmony so that it is interesting and comfortable to read.

Table 2 Aspects of textbook appearance

No	Assessment Aspects	Score					Note
		5	4	3	2	1	
VII. Appearance							
1	Attractive cover design for student learning motivation	√					
2	Attractive cover design for student learning motivation	√					
3	Learning designed to be student-centered (<i>Students Centered Learning</i>)	√					
4	The type of font used is easy for students to read		√				
5	The type of font used is easy for students to read		√				



Then the researcher calculated the display value using the following formula.

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

Information:

V_{ah} : Expert validity

T_{se} : Total validator empirical score

T_{sh} : Maximum total score

$$V_{ah} = \frac{23}{25} \times 100 \%$$

$$V_{ah} = 92 \%$$

Table 3 Assessment of Aspects of Textbook Presentation

I. Assessment Aspects		5	4	3	2	1	Note
1	The presentation of material in each unit begins with Learning Outcomes and indicators of English language ability <i>English for Maritime</i> (reading, writing, listening, speaking)	√					
2	The contents of the book are presented in a coherent manner (introduction, material, activities and exercises) in each textbook unit	√					
3	The presentation of material in textbooks from the beginning to the end of the unit is presented continuously and coherently		√				
4	The textbook contains the final achievements of the lecture, competencies and indicators in each textbook unit	√					
5	Textbooks contain relevant pictures or illustrations to make it easier for users to understand the material		√				

Then the researcher calculated the presentation value using the following formula.

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

Information:

V_{ah} : Expert validity

T_{se} : Total validator empirical score

T_{sh} : Maximum total score

$$V_{ah} = \frac{23}{25} \times 100 \%$$

$$V_{ah} = 92 \%$$

Table 4 Assessment of Aspects of Textbook Material

No	Evaluation	Score					Note
		5	4	3	2	1	
Material Aspects							
1	The material developed has relevance to the CPL and the final abilities to be achieved	√					
2	The material developed is consistent with the abilities to be achieved	√					
3	The material developed is adequate so that students are able to master the final	√					



- competencies they want to achieve
- 4 The presentation is appropriate so that it makes it easier for students to master the material and master the competencies they want to achieve ✓
- 5 The examples given can help students understand the material ✓

Then the researcher calculated the value of the material aspects using the following formula.

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

Information:

V_{ah} : Expert validity

T_{se} : Total validator empirical score

T_{sh} : Maximum total score

$$V_{ah} = \frac{25}{25} \times 100 \%$$

$$V_{ah} = 100 \%$$

Table 5 Assessment of Language Aspects of Textbooks

No	Evaluation	Score					Note
		5	4	3	2	1	
Language Aspects							
1	Presentation of material uses a communicative writing style	√					
2	Presentation of examples uses language that is communicative, easy to understand and contextual	√					
3	Practice instructions use short sentences and are clear to understand	√					
4	Sentence instructions Assignments develop <i>reading skills</i>	√					
5	Assignment sentence instructions develop <i>writing skills</i>	√					
6	Sentence instructions Assignments develop <i>listening skills</i>	√					
7	Sentence instructions Assignments develop <i>speaking skills</i>	√					
8	Material descriptions use effective sentences	√					

The value of language aspects number 1 to 8 is 5. Thus, the total number of language aspects is 40. From the obtained values, the researcher then calculated the value of the language aspect using the following formula.

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

Information:

V_{ah} : Expert validity

T_{se} : Total validator empirical score

T_{sh} : Maximum total score

$$V_{ah} = \frac{40}{40} \times 100 \%$$

$$V_{ah} = 100 \%$$



The result of calculating the language aspect is 100. This value is then interpreted using table 3.12 product validity conversion . The table shows that the value range 89-100 has a very valid level of validity. Thus the value of the level of validity of textbook products from a language perspective is very good.

Next, the researcher explained the total value of each of the four aspects. The total score obtained in the display aspect is 23. The textbook presentation score is 23. The material aspect value is 25. The language aspect is 40. The overall score of these four aspects is 111. The maximum value is 115. Then the researcher calculated the value of the four aspects using the following formula.

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

Information:

V_{ah} : Expert validity

T_{se} : Total validator empirical score

T_{sh} : Maximum total score

$$V_{ah} = \frac{111}{115} \times 100 \%$$

$$V_{ah} = 96,5 \%$$

The overall calculation result for aspects of textbooks is 96.5. This value is then interpreted using table 3.6 product validity level conversion. Thus, the value of the validity level of textbook products from all aspects is very good or very valid.

c. Expert Assessment of 2 Textbooks on Appearance, Presentation, Material and Language Aspects

Table 6 Obtained Validity Values for Textbooks from the Appearance, Presentation, Material and Language Aspects

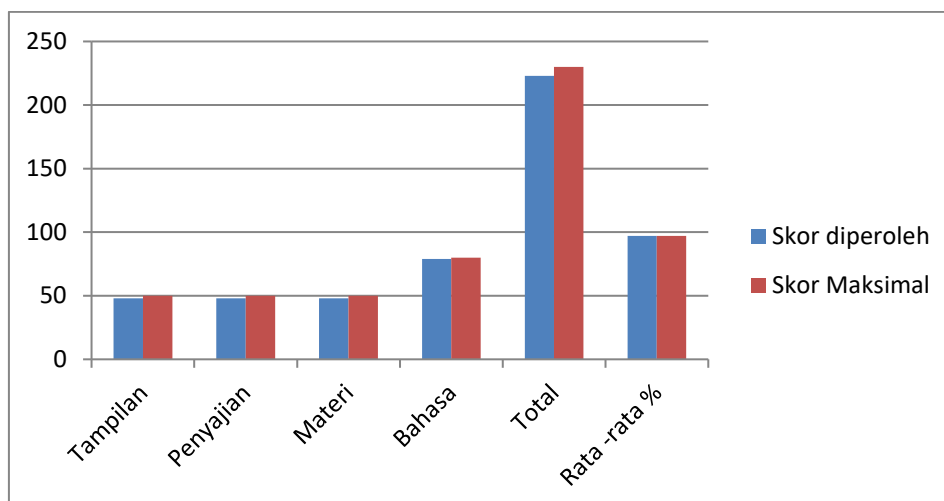
Textbooks	Value obtained		Amount	Max Value
	Expert 1	Expert 2	N2 expert	
Display Aspects	23	25	48	50
Presentation Aspects	23	25	48	50
Material Aspects	25	23	48	50
Language Aspects	40	39	79	80
Amount	111	112	223	230

From the table above, it can be calculated for each aspect of the textbook with the results as in the following picture:

$$\begin{aligned} \text{Display Vah} &= \frac{\text{Skor Vah 1} + \text{Skor Vah2}}{\text{Total skor maksimal}} \times 100 = \frac{23 + 25}{50} \times 100 = \frac{48}{50} \times 100 = 96 \\ \text{Presentation Vah} &= \frac{\text{Skor Vah 1} + \text{Skor Vah2}}{\text{Total skor maksimal}} \times 100 = \frac{23 + 25}{50} \times 100 = \frac{48}{50} \times 100 = 96 \\ \text{Matter Vah} &= \frac{\text{Skor Vah 1} + \text{Skor Vah2}}{\text{Total skor maksimal}} \times 100 = \frac{23 + 25}{50} \times 100 = \frac{48}{50} \times 100 = 96 \\ \text{Vah language} &= \frac{\text{Skor Vah 1} + \text{Skor Vah2}}{\text{Total skor maksimal}} \times 100 = \frac{40 + 39}{80} \times 100 = \frac{79}{80} \times 100 = 98.8 \end{aligned}$$

Furthermore, from table 4.8, the total score obtained from the two experts in each of these aspects is 223. The maximum number of scores is 230. Next, the researchers calculated these scores using a formula and presented them in graphical form as follows:

$$\begin{aligned} V_{ah} &= \frac{T_{se}}{T_{sh}} \times 100 \% \\ V_{ah} &= \frac{223}{230} \times 100 \% \\ V_{ah} &= 96,96 \% \end{aligned}$$



Graph 2 Expert Assessment of Appearance, Presentation, Material & Language Aspects

Next, this value is interpreted using table 3.12 validity level conversion. The conversion table states that the value range 86-100% has a very valid validity level category. The calculation results show that the validity value of the two experts is 96.96. Thus, in terms of appearance, presentation, material and language, the English textbook *English for Maritime* is very good or very valid.

d. Assessment of textbooks by course lecturers

The assessments of the 2 lecturers are as follows. The total value in display aspect number 1 is 50. The total value in display aspect number 2 is 50. The total score obtained by 2 lecturers in the appearance aspect. is 50. The maximum value for the display aspect is 50. The data obtained for this value can be seen in the following table:

Table 7 Results of Assessment of Textbook Display Aspects by Lecturers

Aspect Book Aajar	No Items	Questionnaire Values by Course Lecturers		Mark Total	Mark Max
		MDI	MAK		
Appearance	1	5	5	10	10
	2	5	5	10	10
	3	5	5	10	10
	4	5	5	10	10
	5	5	5	10	10
Amount	5	25	25	50	50

The results of the assessment of the textbook appearance aspects are calculated using the following formula.

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

Information:

V_{ah} : Expert validity

T_{se} : Total validator empirical score

T_{sh} : Maximum total score

$$V_{ah} = \frac{50}{50} \times 100 \%$$

$$V_{ah} = 100 \%$$



The assessments of the 2 lecturers are as follows. The total value in display aspect number 1 is 50. The total value in display aspect number 2 is 50. The total score obtained by 2 lecturers in the appearance aspect. is 50. The maximum value for the display aspect is 50. The data obtained for this value can be seen in the following table:

Table 8 Results of Assessment of Aspects of Textbook Presentation by Lecturers

Aspect	No	Value Questionnaire By		Mark	Mark
Book	Items	Course Lecturer		Total	Max
Aajar		MDI	MAK		
Presentation	1	5	5	10	10
	2	5	5	10	10
	3	5	5	10	10
	4	5	5	10	10
	5	5	5	10	10
Amount	5	25	25	50	50

The results of the assessment of the presentation aspect of the textbook are calculated using the following formula.

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

Information:

V_{ah} : Expert validity

T_{se} : Total validator empirical score

T_{sh} : Maximum total score

$$V_{ah} = \frac{50}{50} \times 100 \%$$

$$V_{ah} = 100 \%$$

The assessments of the 2 lecturers are as follows. The total value in display aspect number 1 is 50. The total value in display aspect number 2 is 50. The total score obtained by 2 lecturers in the appearance aspect. is 50. The maximum value for the display aspect is 50. The data obtained for this value can be seen in the following table:

Table 9 Results of Assessment of Textbook Material Aspects by Lecturers

Aspect	No	Value Questionnaire By		Mark	Mark
Book	Items	Course Lecturer		Total	Max
Aajar		MDI	MAK		
Material	1	5	5	10	10
	2	5	5	10	10
	3	5	5	10	10
	4	5	5	10	10
	5	5	5	10	10
Amount	5	25	25	50	50

The results of the assessment of aspects of the textbook material are calculated using the following formula.

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

Information:

V_{ah} : Expert validity

T_{se} : Total validator empirical score

T_{sh} : Maximum total score



$$V_{ah} = \frac{50}{50} \times 100 \%$$

$$V_{ah} = 100 \%$$

The assessments of the 2 lecturers are as follows. The total value in display aspect number 1 is 50. The total value in display aspect number 2 is 50. The total score obtained by 2 lecturers in the appearance aspect. is 50. The maximum value for the display aspect is 50. The data obtained for this value can be seen in the following table:

Table 10 Results of Assessment of Language Aspects of Textbooks by Lecturers

Aspect Book Ajar	No Items	Value Questionnaire By Course Lecturer		Mark Total	Mark Max
		MDI	MAK		
	1	5	5	10	10
	2	5	5	10	10
	3	5	5	10	10
Language	4	5	5	10	10
	5	5	5	10	10
	6	5	5	10	10
	7	5	5	10	10
	8	5	5	10	10
Amount	8	80	80	800	800

The results of the assessment of the language aspects of the textbook are calculated using the following formula.

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

Information:

V_{ah} : Expert validity

T_{se} : Total validator empirical score

T_{sh} : Maximum total score

$$V_{ah} = \frac{800}{800} \times 100 \%$$

$$V_{ah} = 100 \%$$

The result of calculating the language aspect is 100. This value is then interpreted using table 3.12 product validity level conversion. The conversion table states that the value range of 86-100% has a very valid validity level category. Thus, the value of the validity level of the textbook product in terms of appearance is very good.

Next, to find out the value of the textbook as a whole, the researcher combined the appearance aspect value, presentation value, material aspect value, and language aspect value. The results obtained from the appearance aspect value are 80, the presentation aspect value is 80, the material aspect value is 80, and the language aspect value is 80. Meanwhile the maximum value for the appearance aspect is 80, the presentation aspect is 80, the material aspect is 80, the language aspect is 80 as explained in the following table:

Table 11 Recapitulation of overall textbook assessment results by lecturers.

Textbooks	Grades obtained from lecturers (Users)	Max Value	Presentation Value
Display Aspects	50	50	100
Presentation Aspect	50	50	100



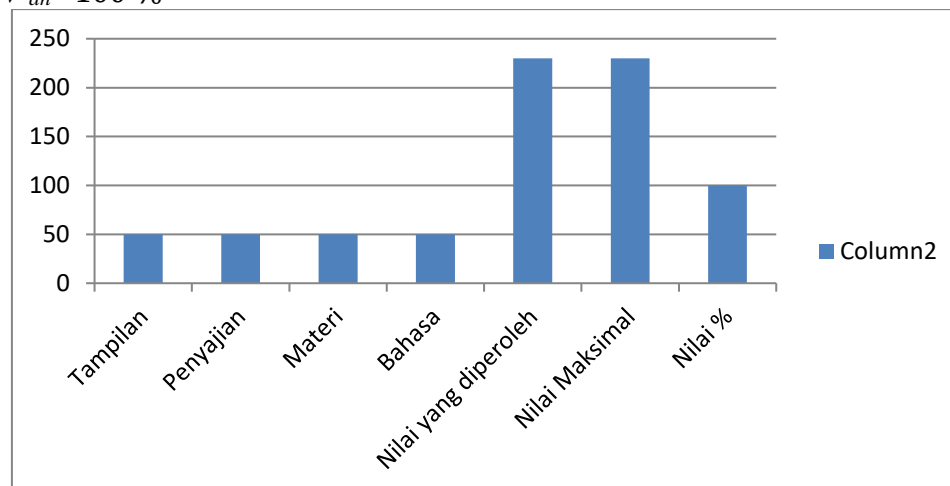
Material Aspects	50	50	100
Language Aspects	80	80	100
Amount	230	230	100

Furthermore These values are analyzed using the formula , consulted with table 11 validity level conversions, and depicted with the following graph:

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

$$V_{ah} = \frac{230}{230} \times 100 \%$$

$$V_{ah} = 100 \%$$



Graph 3 Lecturer Assessment of Appearance, Presentation, Material & Language Aspects

Based on calculations using a formula, the results of the textbook assessment by the course lecturer were 100%. After converting with the validity level conversion table 3.12 , the textbook product from the aspects of appearance, presentation, material and language is categorized as very valid. Thus, the value obtained from the user (course lecturer), it can be stated that this textbook is very suitable for use in English for Maritime lectures at the Banyuwangi Maritime Academy.

e. Textbook Assessment by Audience (Students)

The assessment of textbooks from the appearance aspect was carried out by 10 audiences (students). Commercial and Port Shipping Management (KPNK) study program. There are 5 indicators in assessing aspects of textbook appearance. Assessment of textbook appearance aspects includes 1) the attractiveness of the cover design for student learning motivation, 2) consistent textbook design on each page, 3) learning designed to be student-centered (*Students Centered Learning*), 4) legibility of the type of font used to make it easier to read students, 5) image layout, text regularity and harmony so that it is interesting and comfortable to read.

Table 12 Results of Assessment of Textbook Display Aspects by Students

Aspect Book Teach	No Items	Ar	Wil	riz	Jan	rus	Yun	war	Del	far	mad	Mark Total	Mark Max
Appearance	1	4	5	5	5	5	4	4	4	4	5	45	50
	2	5	5	5	5	5	4	4	5	5	5	48	50
	3	5	5	5	5	5	4	4	4	5	5	47	50
	4	4	4	3	4	5	5	4	5	4	5	43	50
	5	5	4	3	5	5	4	4	4	3	5	42	50



Amount 5 23 23 21 24 25 21 20 22 21 25 225 250

The results of the assessment of the textbook appearance aspects are calculated using the following formula.

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

Information:

V_{ah} : Audience / Student Validity

T_{se} : Total empirical score of Audience / Students

T_{sh} : Maximum total score

$$V_{ah} = \frac{225}{250} \times 100 \%$$

$$V_{ah} = 90 \%$$

The assessments of the 10 students are as follows. The total score in presentation aspect number 1 is 46. The total score in presentation aspect number 2 is 47. The total score in presentation aspect number 3 is 47. The total score in presentation aspect number 4 is 46. The total score in presentation aspect number 5 is 46. The total score obtained by 10 students in the presentation aspect was 232. Meanwhile, the maximum score for the presentation aspect is 250. To be able to clearly see the score obtained for each presentation aspect, the assessment data for this aspect is shown in the following table:

Table 13 Results of Assessment of Textbook Presentation Aspects by Audience (Students)

Textbook Aspects	No Items	Ar	Wil	riz	Jan	rus	Yun	war	Del	far	mad	Mark Total	Mark Max
Presentation	1	4	5	5	5	5	5	4	4	4	5	45	50
	2	5	5	5	5	4	5	4	5	5	5	48	50
	3	5	5	5	5	4	4	4	5	5	5	47	50
	4	5	5	5	4	5	4	4	5	4	5	43	50
	5	5	5	5	4	4	5	4	5	3	5	42	50
Amount	5	24	25	25	23	22	23	20	24	21	25	232	250

The results of the assessment of the presentation aspect of the textbook are calculated using the following formula.

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

Information:

V_{ah} : Audience / Student Validity

T_{se} : Total empirical score of Audience / Students

T_{sh} : Maximum total score

$$V_{ah} = \frac{232}{250} \times 100 \%$$

$$V_{ah} = 92.8 \%$$

The assessments of the 10 students are as follows. The total score in material aspect number 1 is 46. The total score in material aspect number 2 is 45. The total score in material aspect number 3 is 47. The total score in material aspect number 4 is 43. The total score in material aspect number 5 is 47. The total score obtained by 10 students in the material aspect was 228. Meanwhile, the maximum score for the display aspect is 250. To be able to clearly see the score obtained for each aspect of the material, the assessment data for this aspect is shown in the following table:



Table 14 Results of Assessment of Textbook Material Aspects by Students

Aspect	No	Questionnaire Values By Students										Mark	Mark
Book	Items	Ar	Wil	riz	Jan	rus	Yun	war	Del	far	mad	Total	Max
Teach													
Material	1	5	4	5	5	5	3	4	4	4	5	46	50
	2	5	5	5	5	4	4	4	5	5	5	45	50
	3	5	5	5	5	4	4	4	5	5	5	47	50
	4	5	4	5	5	5	4	4	5	4	5	43	50
	5	5	5	5	4	4	4	4	5	3	5	47	50
Amount	5	25	23	25	24	22	19	20	23	22	25	228	250

The results of the assessment of aspects of the textbook material are calculated using the following formula.

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

Information:

V_{ah} : Expert validity

T_{se} : Total validator empirical score

T_{sh} : Maximum total score

$$V_{ah} = \frac{228}{250} \times 100 \%$$

$$V_{ah} = 91,2 \%$$

The assessments of the 10 students are as follows. The total score for language aspect number 1 is 44. The total score in language aspect number 2 is 45. The total score in language aspect number 3 is 47. The total score in language aspect number 4 is 48. The total score in language aspect number 5 is 46. The total score in language aspect number 6 is 48. The total score in language aspect number 7 is 48. The total score in language aspect number 8 is 46. The total score obtained by 10 students in the language aspect was 372. Meanwhile, the maximum score in the language aspect is 400. Data on the scores obtained can be seen in the following table:

Table 15 Results of Assessment of Language Aspects of Textbooks by Audience (Students)

Aspect	No	Questionnaire Values By Students										Mark	Mark
Book	Items	Ar	Wil	riz	Jan	rus	Yun	war	Del	far	mad	Total	Max
Teach													
Language	1	5	5	5	5	5	3	4	5	4	5	44	50
	2	5	5	5	5	4	4	4	5	4	5	45	50
	3	5	5	5	5	4	4	4	5	5	5	47	50
	4	5	5	5	5	5	4	4	5	5	5	48	50
	5	5	5	5	5	4	5	4	5	3	5	46	50
	6	5	5	5	5	5	4	4	5	5	5	48	50
	7	5	5	5	5	4	3	4	5	5	5	48	50
	8	5	5	5	5	5	3	4	5	3	5	46	50
Amount	8	40	40	40	40	36	30	32	40	34	40	372	400

of the textbook are calculated using the following formula .

$$V_{ah} = \frac{T_{se}}{T_{sh}} \times 100 \%$$

Information:

V_{ah} : User Validity

T_{se} : Total empirical score of lecturers/students

T_{sh} : Maximum total score

$$V_{ah} = \frac{372}{400} \times 100 \%$$



$$V_{ah}=93\%$$

The result of calculating the language aspect is 93. This value is then interpreted using table 3.7 product validity level conversion. The conversion table states that the value range of 89-100% has a very valid validity level category. Thus, the value of the level of validity of textbook products in terms of language is very good or very valid.

Furthermore, to determine the validity of all aspects of the textbook, researchers combined the scores from four aspects, namely appearance, presentation, material and language as follows.

Table 16 Recapitulation of Overall Validity Value Assessment Results for Textbooks by Audience (Students)

Textbooks	The value obtained from Student	Max Value	Presentation Value
Display Aspects	225	250	90
Presentation Aspect	232	250	92.8
Material Aspects	228	250	91.2
Language Aspects	372	400	93
Amount	1057	1150	91.91

The total number of scores obtained from 10 students in each of these aspects was 1057. Meanwhile, the maximum score was 1150. Next, the researcher calculated the scores using a formula and presented them in graphical form as follows:

The results of the assessment of the language aspects of the textbook are calculated using the following formula.

$$V_{ah}=\frac{T_{se}}{T_{sh}} \times 100\%$$

Information:

V_{ah} : Expert validity

T_{se} : Total validator empirical score

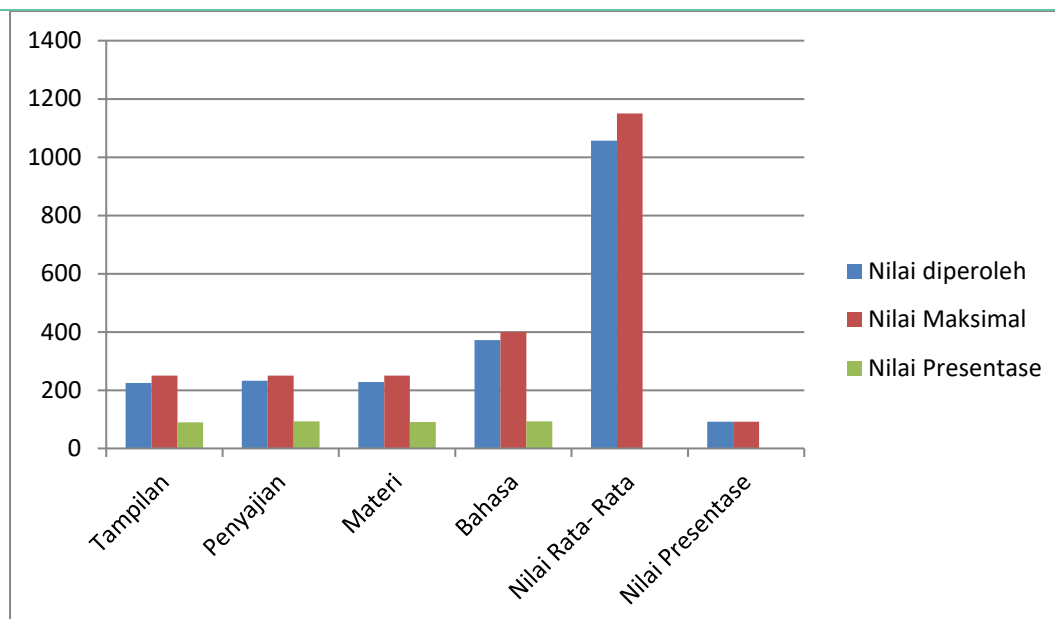
T_{sh} : Maximum total score

$$V_{ah}=\frac{1057}{1150} \times 100\%$$

$$V_{ah}=91,9\%$$

The results of calculating the values above can be seen in the following graph:

Graph 4 Student Assessment of Appearance, Presentation, Material & Language Aspects



Based on Table 3.12 Conversion of Product Validity Levels, the value of textbook products in terms of appearance, presentation, material and language is very valid.

Discussion

Based on the results of data analysis and discussion regarding the validity and effectiveness of the Maritime English textbook, it was found that the validation was carried out by two expert validators on the content validation element, the product in terms of reading 96%, writing 90%, listening 90%, and speaking 100%. % with an average of 93.75% is in the range 86-100%. Thus, the validity of the product in terms of content, English language skills is very good or very valid and can be used without improvement. The validation was carried out by two expert validators in terms of appearance (96%), assessment (96%), presentation (96%), material (96%), and language (98.8 %). The total score for these four aspects is 223, the maximum score is 230. The overall calculation result for aspects of textbooks is 96.96%. This value is then interpreted to mean that the level of validity of the textbook product from all aspects is very good or very valid. Validation was carried out by ten students from the aspects of appearance (90%), assessment (96%), presentation (92.8 %), material (91.2%), and language (93%). The total score for these four aspects is 223, the maximum score is 230. The overall calculation result for aspects of textbooks is 96.96%. This value is then interpreted to mean that the level of validity of the textbook product from all aspects is very good or very valid.

The results of this research indicate that the development of Maritime English textbooks oriented towards the CIRC (Cooperative Integrated Reading and Composition) learning model in higher education has had a positive impact on students' ability to support their preparation for a career in the global maritime industry with competitive language skills. . In teaching English, this textbook provides an innovative and relevant approach, so as to improve students' abilities in English (reading, writing, listening and speaking).

Comparison of the findings of this study with previous studies shows suitability and harmony. Previous research using the CIRC (Cooperative Integrated Reading and Composition) learning model also shows that the development of Maritime English textbooks has had a positive impact on improving students' abilities (Hasnah & Ginting, 2017; Khuzaemah & Herawati, 2017; Harida , 2022 ; Indriana & Syawal, 2022; Jufrizal et al., 2021). The findings of this research are in line with the concept of English textbooks which



emphasize reading, writing, speaking and listening skills (Sastradiharja, & Aziz, 2023; Adi, 2017; Usman, et al., 2019).

The development of Maritime English textbooks provides real benefits for students in higher education (Jaya, & Haling, 2022; Hajarudin, 2023). In teaching English, this textbook provides a more holistic and comprehensive approach, which does not only focus on linguistic aspects, but with the CIRC learning model improves students' reading and writing skills through group collaboration, promotes deeper understanding of texts, and strengthens students' reading and writing skills. communication. Students learn collaboratively, giving each other feedback, which accelerates their mastery of English effectively and happily (Suprpto, 2018; Kertati et al., 2023; Mudofir, 2015; Rifky, 2024). This helps students develop the ability to communicate effectively, work in teams, think critically, and generate creative ideas in solving problems together, think critically, and apply knowledge in real situations in a more structured and integrative way.

Conclusion

This research concludes that the design, validity and effectiveness of the Maritime English textbook have developed and meet the criteria. This can be seen from the responses given by lecturers and students in limited trials and field tests showing average scores in the very practical category. Therefore, the Maritime English textbook applied with the CIRC (Cooperative Integrated Reading and Composition) Learning Based learning model was developed to meet the effectiveness criteria and can then be used by lecturers and other teaching staff in developing English language skills, namely reading, writing, speaking. and listening.

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