ENHANCING QUESTION FORMATION SKILLS THROUGH DEFINITIONAL QUESTION ANSWERING (DQA)

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ABSTRACT

Students often have difficulty in formulating questions that generate specific and definite answers. They lack proficiency in understanding and applying the grammatical structures and syntax required to form questions appropriately. This study aims to improve students' ability to formulate questions through the application of the Definitional Question Answering (DQA) learning method, where questions are designed to produce specific and definite answers. In this study, the experimental method was used to evaluate changes in students' abilities. The research sample consisted of 101 students majoring in management at the Faculty of Economics, Kosgoro Institute of Business and Informatics 1957 (IBIK 57). After intervention with the DQA program, a post-test was administered to assess the effectiveness of the program and students' progress. This study used an experimental design with a pre-test and post-test to evaluate the changes in students' abilities before and after the application of the DQA method. Before the application of the DQA method, all students took an initial test to measure their ability to formulate questions, comprehension of sentence elements, analytical ability, communication, and text comprehension The result is that the intervention or learning method that has been applied between the pre-test and post-test is effective in improving participants' performance. Through this method, teachers may consider incorporating DQA systems into their teaching methods to foster better question formation skills and enhance overall learning and promote an inquiry-based learning environment.

Keywords: Definitional Question Answering, interrogative, Wh Questions, question words

INTRODUCTION

English language learning often emphasizes effective communication skills, one of which is the ability to form appropriate and relevant questions. The formation of good questions is an important skill in understanding the material taught, interacting with others, and expanding knowledge. However, in teaching experience, it is often found that learners face difficulties in forming questions that are appropriate to the given context. Sometimes, this is due to a lack of understanding of the common patterns of answers in a given context, which form

the basis for effective question formation. Question-forming skills are an important aspect of language learning, especially in the context of second or foreign language learning. This skill helps students to understand the material more deeply, increase their engagement in the learning process, and expand their communication abilities. However, students often have difficulty in forming questions that are appropriate to the context and material being learnt. Innovative approaches are needed to improve students' question-forming skills. One approach is to use the answer pattern model which leads to a better understanding of the structure and content of appropriate questions.

In the context of language learning, understanding *Wh*-questions using interrogative words (such as what, where, when, why, who, and how) is key to understanding a conversation, text, or other communication context. These types of questions help in gaining more information, exploring deeper understanding, and actively participating in a conversation or discussion (Jasi, 2013). Thus, the acquisition of WH-questions is a crucial aspect of language development and the learners' study to form and comprehend the question that use interrogative words such as what, when, where, who, and how. This process is linked to the development of sentence structure and comprehension to seek information and clarity the meaning (Roeper & de Villiers, 2011). A study shows that one's first language has a significant influence on learning English as a foreign language in general, and question formation in particular. This suggests that the patterns, structures and rules of one's first language can influence the way they understand, use and form questions in English (Mohammed, 2021). To form questions that are correct in writing, students must understand appropriate grammar. They must understand proper sentence structure, including the position of the verb, subject, and object in a question sentence. For example, in English, common structures for questions often involve the inversion of subject and verb (did you go?, what did he eat?), and students need to understand how to apply these grammatical rules. In addition, students should also understand the necessary interrogative words in their questions. Interrogative words such as "what," "where," "when," "how," "who," and "why" provide direction for the type of information sought in the question. Students

need to understand the context and use of these question words in order to formulate the right questions according to the information they want (Nurjanah et al., 2018). In a related study, it was also shown that students make errors in word order and verb tense in question formation. This could include improper inversion of subjects and verbs or the use of incorrect verb forms (Masruddin & Karmila, 2018).

Modelling WH questions in English can be part of the questioning strategies implemented by teachers in EFL classrooms. This model can help teachers in designing varied and interesting questions to ask students, thus promoting better participation and understanding in English learning (Sujariati et al., 2016). A university study found that grammatical issues in question structure can also be a cause of frequent errors. Students may be unsure about the correct word order or the appropriate use of auxiliary verbs in the question (Silalahi, 2017). A study proved that there is a significant relationship between the application of the WH-Questions technique and the improvement of students' reading comprehension ability. The level of significance mentioned shows that this relationship does not occur by chance, but it is strong enough to be considered a trustworthy result. In other words, using the WH-Questions technique in reading learning has proven to be beneficial in improving students' reading comprehension ability in a statistically significant way (Pratiwi et al., 2018). The results of a recent study reveal that English as a second language (ESL) learners face several problems, especially when they learn to use interrogatives with question words ("wh-interrogatives"). The main problems found include first language interference from Chinese, especially in terms of word order and proper verb selection. This led to difficulties for learners to distinguish between the use of the verbs "be" and "do" as well as to use the correct verb phrase structure. This study highlights the importance of understanding the influence of the first language on second language learning, such as English, and the need for appropriate approaches in addressing the difficulties arising from this first language impairment.(Lee, 2012).

Based on the background and problems above, this study aims to improve students' question forming skills through Definitional Question Answering (DQA). Students are encouraged to understand how to use question words (what, who,

where, when, why, how) to direct answers to specific elements in a sentence. This is an important part of language learning as it teaches them how to structure good questions and how to recognize key elements in a sentence. The Objective of the study is to assess the effectiveness of the DQA method in improving students' question-forming skills, understanding sentence elements, analytical skills, communication, and text comprehension.

Definitional Question Answering (DQA). is a technique where questions are designed to produce specific and definitive answers, usually related to identifying or defining something. In the context of language education, it helps students understand sentence structure and the function of various elements in a sentence (Jurafsky & Martin, 2020). The practice of creating questions from sentences with prescribed answers is part of Definitional Question Answering and is an effective method for improving students' language and critical thinking skills (Sujariati et al., 2016). The problems that can be anticipated by using the Definitional Question Answering (DQA) method in improving students' skills in forming questions are as follows. Firstly, many students have difficulty in formulating clear and precise questions. With DQA, students are trained to use appropriate question words to obtain specific information. Secondly, students are often unable to identify important elements in a sentence. Through DQA, they are taught to focus on the critical parts in a sentence so that their understanding of sentence structure improves. Thirdly, students' low analytical skills can also be addressed. By learning to ask deep and relevant questions, students can think more critically and analytically. Fourth, difficulties in communication are also a problem that can be anticipated. With good questioning skills, students can communicate more effectively, asking relevant questions in conversations or discussions, making their interactions more meaningful. Fifth, limited text comprehension can also be overcome with DQA. Students will better understand the texts they read by asking the right questions, thus improving their overall reading and comprehension skills. Thus, it is expected that students will have stronger language skills and be more confident in using those skills in various academic contexts.

METHOD

The data analysis method applied in the study uses a quantitative approach to assess the effectiveness of using the Definitional Question Answering (DQA). In improving students' ability to create questions with interrogative words (Wh-Q) in English. This study used a pre-test and post-test design to evaluate changes in students' skills before and after the application of the DQA method. Population and Samples are 101 students majoring in management study program, faculty of economics, Insitut Bisnis dan Informatika Kosgoro 1957 (IBIK 57). The research design is a pre-test: Prior to the implementation of the DQA method, all students will take an initial test to measure their question-forming skills. After the intervention, all students take the same final test as the pre-test to measure changes in the skills under study. Data analysis was conducted using data normality test, this is an important step in testing the pre and post test results to ensure the validity of the statistical analysis that has been carried out. The research instruments were written tests and questionnaires.

FINDINGS AND DISCUSSIONS

The research used series of steps to measure and improve students' ability in question formation using question words (what, where, when, why, who, and how) in English. Initially, students were asked to create question sentences, and the errors in their question sentences were carefully analyzed. Some of the errors that occurred include: deviations from correct grammar, such as the use of verbs that don't fit the subject, or the use of the wrong noun, for instance "what a computer", "How this machine works", "Where the pen is". Lack of auxiliary verbs or proper verbs, which leads to incomplete or unclear sentences, such as "Why he at home?", when you to the party". Ambiguity in sentence structure or lack of adequate context, such as "What your favorite?", "How this happened", "Where your book?". Grammatical errors such as incorrect word usage or lack of auxiliary words needed to make the sentence a proper question such as "how many people in the room", "what the function of this device", why you not come to party". Some of these examples are common forms of errors that occur frequently, so this study intervenes to correct

common errors in language use or to help the researcher understand deeper patterns of errors. This is to highlight the more common patterns of errors and possibly provide insight into their causes, thus enabling the development of more effective strategies in language learning.

An intervention session was conducted in which students were taught to use the question pattern model from the sentences that had been determined by the answers. In this session, students chose one question word that matched the answer and determined the appropriate model: question word model with verb to be (model 1) or using auxiliary or other main verbs (model 2). After intensive training and practice, students were tested again to measure their improvement in question writing skills. The results of the post-intervention test were analyzed to evaluate the effectiveness of the intervention and see the changes in the types and frequency of students' errors. It introduces the difference between the verb be and the use of the main verb or other auxiliary verbs.

3.1 Character of "verb *be*" and main verb or other auxiliary verbs (Model 1)

Character Verb "to be" (am, is, are, were, were) is a verb used to describe the state, identity, or attributes of a subject in a sentence. The main focus of the verb "to be" is to state the existence, status, or condition of the subject. This can include things like: identity: Example: "She is a doctor." state: Example: "The sky is blue.", Example: "I am hungry.", location: Example: "The book is on the table.", possession: example: "This house is mine.", relationship: example: "She is my sister.". So, the verb "to be" is used to indicate basic information about the subject, such as what the subject is, where the subject is, or what state the subject is in. It provides a foundation for more complex sentences or additional information that might be expressed in longer sentences. Meanwhile, Auxiliary verbs are auxiliary words to complete the main verb in a sentence. Apart from complementing the main verb, auxiliary verbs also serve to clarify the main verb. Therefore, auxiliary verbs cannot stand alone without the verb. These auxiliary words are used to show tense, aspect, modal, emphasis, and so on. In a clause or sentence, these auxiliary verbs usually appear before the main verb. In a sentence, the main verb usually comes

after the auxiliary verb. Auxiliary verbs have four types: do, be, have, and modals (Rifiyanti, 2022).

3.2. Implementation of making question sentences with WH-Q with answer pattern model

The following are the steps that can be outlined to understand how to create an interrogative sentence with the mentioned model:

1. Read the given sentence and notice the bolded word. This bolded word is part of the given answer, for instance: She went to Jogja **yesterday**, Ihsan and Nisa are preparing **a party** now, Julia works in **a bank**, my father bought a new car **last week**

2. Choose the appropriate model

3. Determine the appropriate question word. Adjust the question word based on the given answer in **bold**

4. Structure the question sentence according to the chosen model:

Table 1

Question with the verb *be*

*Sentence: Ihsan and Nisa are preparing **a party** now*

Question word	Verb be	Subject	Adjective, noun, etc.
What	are	Ihsan and Nisa	preparing now?

Table 2

Question with other main verbs

*Sentence: She went to Jogja **yesterday***

Question word	Auxiliary	Subject	Main verb	
When	did	she	go	to Jogia

By having a clear pattern or model, learners can easily understand how to form interrogative sentences in English. A predefined pattern provides a clear structure for practice. This allows students to focus on understanding grammatical concepts rather than thinking about the overall sentence structure. Although the pattern has been specified, students can still develop different question sentences using the pattern. This allows them to remain creative in formulating questions. With this pattern, we can conclude that Model 1 (WH-q + to be + subject + adjective/noun) is better to use when we want to ask about the attributes or characteristics of the subject. Example of its use are: "Where is the book?", "When is the party?", "What is your favorite color?". Meanwhile, Model 2 (WH-q + auxiliary + Subject + main verb) is more suitable when we want to ask about the subject's action or activity. Examples of its use are:

"Where did you go yesterday?"

"What are you doing?"

"When will she arrive?"

Therefore, to decide between Model 1 and Model 2, consider the type of information you want to ask: whether it is about the attributes/characteristics of the subject or about the actions/activities of the subject. By paying attention to the context and purpose of the question, we can choose the most appropriate model.

Results

The following is the distribution of pre-test scores from 101 students:

Table 3.

Pre-Test Scores

Score	Number of Students
90-100	9
80-89	16
70-79	24
60-69	25
50-59	16
40-49	11
30-39	0
< 30	0
Total	101

Based on performance level, the participants had a mean score of 64.85, with a typical spread of 15.27 points around the mean. As for the level of the distribution, scores ranged from 40 to 100, with a mode and median of 60, indicating that many participants scored around 60. In terms of variability, the standard deviation showed moderate variability, meaning that there were notable differences in participants' scores. The pre-test results implicitly showed a moderate level of understanding with considerable variability among the participants. This indicates a mixed group with different levels of preparedness and knowledge. The results highlight the need for targeted interventions to bring low-performing participants up to a higher standard, while also potentially providing follow-up materials for those who scored well. The diversity of scores suggests the need for differentiated instruction or support to meet the diverse needs of participants.

The Definitional Question Answering (DQA) approach was administered in the intervention section. It is a structured and effective method designed to help English language learners master question sentence formation. The approach provides learners with a clear and organized framework for understanding the grammatical structures involved in creating questions, making the learning process systematic and practical. The process starts with the introduction of different types

of question sentences. Learners are familiarized with Yes/No questions, WH questions (such as who, what, when, where, why, and how), and marker questions. By providing definitions and examples for each type, learners gain a basic understanding of the different forms of questions and their purposes. Next, the approach outlines the grammatical structure of question sentences. This involves using simple declarative sentences and demonstrating how they can be turned into questions. For example, students are shown how to invert the subject and auxiliary verbs to form Yes/No questions ('He is reading' becomes 'Is he reading?'). They also learn how to place the WH word at the beginning of the sentence and adjust its structure ('He is reading a book' becomes 'What is he reading?'). This step-by-step breakdown helps students understand the mechanism of question formation. And the most important thing in formulating a definitive question is to provide a number of sentences that have answers and the students are asked to create corresponding question sentences. The four-week Definitional Question Answering (DQA) intervention program offers English learners a clear, structured and practical approach to mastering question sentence formation. Through a combination of instruction, practice, feedback and real-world application, learners gain the skills and confidence needed to ask questions accurately and effectively. This intervention not only improves their grammatical understanding, but also enhances their overall communicative competence in English.

Furthermore, a post-test was administered after the Definitional Question Answering (DQA) intervention program, which played an important role in evaluating the effectiveness of the program and students' progress. By comparing the results of the pre-test and post-test, educators can measure the impact of the intervention, identify areas for improvement, and make informed decisions for future teaching. The significant improvement in students' ability to form question sentences not only improved their grammar skills, but also contributed to their overall communicative competence in English. And the results are as follows:

Table 4.

Post Test Scores

Score	Number of Students
90-100	45
80-89	18
70-79	25
60-69	6
50-59	6
40-49	1
30-39	0
< 30	0
Total	**101**

To test the pre-test and post-test data, it is necessary to see the distribution of data for each condition by testing the normal distribution of the data using the data normality test. The results of testing the normality of pre-test and post-test data using the Kolmogorov-Semirnov test can be seen in Table 3 as follows:

Table 5.
One-Sample Kolmogorov-Smirnov Test

		Nilai Pre-Test	Nilai Post-Test
N		101	101
Normal Parameters[a,b]	Mean	64.8515	79.9010
	Std. Deviation	15.27180	14.24746
Most Extreme Differences	Absolute	.139	.206
	Positive	.139	.133
	Negative	-.117	-.206
Kolmogorov-Smirnov Z		1.402	2.074
Asymp. Sig. (2-tailed)		.039	.000

a. Test distribution is Normal.
b. Calculated from data.

The mean score, median score, and most frequently occurring score all increased. A slight decrease in standard deviation indicates that scores became more consistent in the post-test. Although the minimum and maximum scores remained

unchanged, the overall increase in measures of central tendency (mean, median, mode) reflected a positive shift in group performance. Based on the results of testing the normality of the data in the table above, it can be seen that the significance value for the pre-test value is 0.039 and the post-test value is 0.000 and both are smaller than the aplha value of 0.05, it can be concluded that the two data are abnormally distributed, so that to test different paired data, non-parametric statistical testing can be used with the Wilcoxon test. The test results using the Wlcoxon test can be seen in Table 4 below:

Table 6.
Test Statistics[a]

	Nilai Post-Test - Nilai Pre-Test
Z	-7.559[b]
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

Based on the results of the Wilcoxon test in the table above, the significance value is 0.000 and smaller than the alpha value of 0.05, it can be concluded that there is a real or significant difference between the pre-test and post-test scores, so that by looking at the average pre-test value of 65 and the average post-test value of 80, this shows an increase in student ability scores. This interpretation implies that the intervention or study method that has been applied between the pre-test and post-test is effective in improving participants' performance. Interventions using the DQA method offer a holistic approach to language learning, which not only fosters grammar proficiency, but also communication skills, critical thinking skills, and active engagement in the learning process. In addition to linguistic proficiency, interventions using the DQA method also stimulate critical thinking skills. The process of developing questions requires analyzing, synthesizing and evaluating information, thus encouraging students to think critically about the content being studied. By encouraging enquiry and exploration, the method empowers students to become intelligent thinkers capable of making informed decisions and solving

complex problems. In addition, the DQA method encourages active engagement in the learning process. By integrating hands-on activities, collaborative exercises, and inquiry-based learning approaches, students are encouraged to take ownership of their education and become active participants in the learning journey. This fosters a sense of belonging and empowerment, motivating students to pursue knowledge with enthusiasm and curiosity. In essence, interventions using the DQA method symbolize a holistic approach to language learning that transcends the boundaries of traditional pedagogy. By fostering grammar proficiency, communication skills, critical thinking abilities and active engagement, it equips students with the tools they need to thrive in an increasingly connected and dynamic global landscape.

In higher education, students are often expected to be more independent in their learning. However, this does not mean that learning should be a passive process. On the contrary, actively engaging students in learning through methods such as DQA can help them deepen their understanding of the material and improve information retention. Integrating the method of creating answer patterns by underlining keywords in the DQA framework can increase students' engagement and deepen their understanding of the material. As such, it can be an effective tool in an interactive and collaborative learning process (Prasetianto, 2019). Interactive and participatory activities, such as forming questions and searching for answers, allow students to engage directly with the subject matter (Prasetyawati, 2015). Through active participation, students can also develop collaboration and communication skills, which are important in the context of higher education and the world of work. Hence, while the approach to learning in higher education may be more independent, the integration of DQA principles can enrich students' learning experience and improve the effectiveness of their learning. The method provides a framework that can be applied in a variety of college-level learning contexts, be it in class discussions, research projects, or practicum activities.

CONCLUSION

The conclusion from the implementation of using the Definitional Question Answering (DQA). to create question sentences is that this approach provides a

clear and organized structure for English learners to understand and master the formation of question sentences. By offering two different models, namely Model 1 (Wh-Q + to be + subject + adjective/noun) and Model 2 (WH-q + auxiliary + Subject + main verb), learners have the option to customize their questions according to the type of information they want to get. These models help clarify grammatical concepts and improve understanding of how to form interrogative sentences in English. In conclusion, the application of the answer pattern model is an effective strategy in supporting the learning of English grammar, facilitating better understanding and improving overall communication skills. Without using the model, learners may have difficulty in understanding or learning consistent interrogative sentence patterns. By using the model, they have a clear guide on how to word their questions, which can help them accelerate their understanding and mastery of English grammar. In conclusion, the application of the answer pattern model is an effective strategy in supporting the learning of English grammar, facilitating better comprehension and improving overall communication skills. Without using the model, learners may have difficulty in understanding or learning consistent question sentence patterns. By using the model, they have a clear guide on how to word their questions, which can help them accelerate their understanding and mastery of English grammar. In addition, the answer pattern model can also help in avoiding confusion or mistakes that may arise when learners try to create interrogative sentences without clear guidance. Thus, the use of the Definitional Question Answering (DQA) can improve the efficiency and effectiveness of English learning.

Acknowledgments

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