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# Activating Students to Speak English through Interpreting Graphs

Khaerati[1*], Bungatang[2], Khaidarsyah[1]

[1]Universitas Patompo, Makassar
[2] Universitas Negeri Makassar, Makassar

**Corresponding Address*: khaeratijafaruddin@gmail.com

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**ABSTRACT**

This research is qualitative descriptive research which aimed at finding out (1) whether students actively engage in speaking English through interpreting graphs and (2) whether students have a positive attitude towards the use of graphs in speaking classes. The population of this study consists of first-semester students in the Economics Education study Program at Universitas Patompo for the academic year 2022/2023. The researcher employed purposive sampling technique, involving 30 students. Two types of instruments were used in this research: observation techniques and questionnaires. Observation was used to assess students' participation in speaking English, while questionnaires were used to find out students' attitudes towards the use of graphs in speaking classes. Data analysis results indicated that 1) the use of graphs in speaking can activate students to speak English. In the interpretation of pie charts, the average speaking frequency of students is 3.3% and categorized into active. In the interpretation of line graphs, the average speaking frequency of students is 3.3% over 90 minutes and categorized into active. In the interpretation of bar graphs, the average students' speaking frequency was 3.83% in 90 minutes and categorized as very active. 2) The questionnaire indicated that 11 (36.67%) out of 30 students strongly agree, 17 (56.67%) students agree, 2 (6.66%) students rather agree, with none of them disagree and strongly disagree with the use of graphs in speaking class. While the mean score was 57.06, indicating that students have a positive attitude towards the use of graphs in speaking classes.

Keywords: *Activating, speaking, interpreting graphs*

## INTRODUCTION

English, as one of the foreign languages, plays a crucial role in Indonesia both in written and spoken communication. Due to its significance, English has become a mandatory foreign language subject taught from junior high school through university level in Indonesia. English is one of the general subjects taught in universities, particularly in Economics programs where students typically take two English courses: general English and Business English.

One of the challenges faced is that despite English being a primary foreign language in our country, it is rare to find natural English input for our students from society. The development of communication, information, and technology on the internet is seldom used by students to enrich their speaking skills, which could affect them when facing the reality of their English-speaking skill needs. In higher education, English speaking skills are increasingly essential to consider. Alongside globalization and the growth of international collaborations, the ability to communicate in English effectively is not only a competitive advantage but also a practical necessity in various fields.

Economics education students need reading and interpreting graph skills, both during their learning process as well as in their future careers. One promising way to address this challenge is through integrating graph. Graphs, including diagrams, tables, and statistical charts, not only provide effective visual tools for conveying information but also open opportunities for students to speak actively. Graph interpretation activities not only stimulate speaking skills but also engage students in understanding and analyzing information deeply.

This ability is invaluable in producing university graduates who are not only proficient in English but also capable in communicating effectively in academic and professional environments. Therefore, the introduction of graph interpretation in English language learning at the university level is expected to make a positive contribution to the development of students' English speaking skills.

In the context of the issues stated before, English teaching should foster the potential to create effective learning processes and classroom management by implementing various specific techniques. In this technique can activate students to practice speaking actively without neglecting their interests and preferences. It is recognized that students will achieve good results in an activity only if they are interested and motivated in what they are doing. Moreover, many university textbooks contain various visual elements such as graphs, maps, diagrams, charts, or graphs. This is highly relevant, especially for individuals involved in the technology or business world. The ability to understand, use, and even create various types of graphs and statistical tables is essential. This practice is not limited to academic activities but is also crucial in the business and economic world, where the ability to summarize and simplify operational data presentations in tables and graphs has significant impacts.

Therefore, students are expected to apply these skills in composing their theses or dissertations. Thus, the application of effective teaching techniques in English language courses is expected to enhance mastery of visual skills such as graph interpretation, thereby positively contributing to students' speaking abilities and analytical skills, equipping them with relevant skills for challenges in both academic and professional worlds.

Some advantages of using graphs:

1. Practical
2. Presenting the main features of data at a glance. The main features of the data are immediately visible.
3. Powerful.
4. Providing more emphasis than text or tables.
5. Conveying intentions directly, rather than just stating them, graphs can show lines and case points directly.
6. Concise because it displays information in a small space. Since the graphical display is clear, it encompasses all the information to be displayed.
7. Engaging. Easier to see compared to text or tables. Graphical forms are more engaging and easier to see (Selby, 1979, 40).

Although commonly used graphs today provide unique opportunities to present complex data in simple visual forms and even the information contained in diagrams clearly, they usually require some oral explanation and written comments (Jordan: 1980). On the other hand, they sometimes also pose interpretation problems. Therefore, skills are required in interpreting data in graph form so that messages can be conveyed correctly. Essentially, the word 'interpreting' means:

1. To understand the possible approach to something.
2. To indicate the meaning (possibly) of something.
3. To put (a language) into words using another language (Longman Dictionary of Contemporary English, 1978, 586). Additionally, "interpreting" means to explain or inform the meaning, translating into easy-to-understand language or terms, expounding, explaining, translating.

Hsın (1988:36) summarizes eight teaching techniques for speaking as follows:

1. Retelling activities

2. Information exchange
3. Using dialogue
4. Role-playing
5. Description
6. Interpretation
7. Activities outside the classroom

This research focused on graph interpretation that activated students to speak English. This research discussed the activity of first-semester students in the Economics Education study program at Universitas Patompo speaking English through interpreting graph, as well as students' positive attitudes towards using graphs in English-speaking classes. The graphs used in the research are statistical facts, such as pie charts, line graphs, and bar graphs.

(Webster's Contemporary English Longman Dictionary, 1978) Webster (1979:20) defines the word 'active' as:

1. Acting, functioning, moving, and working,
2. Able to create, operate, etc.
3. Causing action, movement, or action,
4. Marked by 'rapid movement or deposition to move quickly,
5. Busy, constantly, involved in action, enthusiastic, diligent, and energetic,
6. Requiring action or exertion, practical, producing real effects, contrary to theory, ideal, or speculative, as an active task.

While speaking is an oral communication means that conveys ideas or information to others. It is the most important way in which speakers can express themselves through language. Widowson (1978, 58) states that a communication act through speaking is generally a performance in face-to-face interaction and occurs as part of a dialogue or more precisely verbal exchange, depending on understanding. In speaking, people express ideas in words, discuss perceptions, feelings, and intentions that they want others to understand. Learning to speak is clearly more difficult than learning to understand spoken language. Because of its difficulty, students should achieve speaking skills by practicing a lot, such as asking questions or expressing ideas both inside and outside the classroom (Chastain, 1976, 334). Ur (1996:120) classifies some successful speaking activity characteristics as follows:

1. Many students speak
2. Participation is equal
3. Innovation is high
4. Language is at an acceptable level.

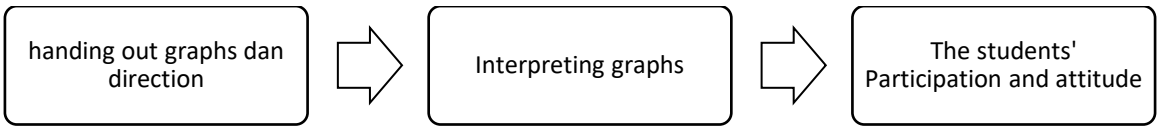
(Nila et.al., 2022) in their research found out that learning using the Ping-pong Ball Chart media can improve students' ability to read graphs, indicating that diverse exercises and methods are needed to train students to read or interpret graphs. Dealing with this, Sukawati (2015) found out that the Snowball Throwing learning model can improve students' speaking confidence and graph reading abilities in class IX B students of SMP Negeri 2 Musuk and Indonesian language learning becomes more enjoyable. Additionally, (Syafii, 2022) in his article titled Improving English Speaking Skills through charts found out that charts can be used in teaching and improving students' speaking skills and also assist student learning activities.

Interpreting graphs in speaking classes are related to practicing oral language skills that focus on speaking skills. The researcher applied the following steps:

1. Giving instructions. Students are divided into several groups, then the researcher gives instructions to students on an easy way to interpret graphs.
2. Asking and responding. Students can ask and answer questions related to the graph.
3. Interpretation. Students interpret the graphs themselves by showing the graphs to other students in their group. And one member of each group presents their interpretation in front of other groups.

In learning, language attitudes are closely related to motivation. Attitudes can be used to refer to a set of beliefs held by learners about the community and people who speak the target language (Ramirez, 1995, 105). Attitudes often determine or support the success of students in learning a second language. (Lambert, 1980) in Halim states that a relatively stable attitude evaluates responses to an object that has cognitive, affective, and possibly behavioral components. From this understanding, it can be concluded that an attitude is how someone perceives something, whether positively or negatively.

Theoretical Framework




1. INPUT: Input refers to the graphs provided to the students.
2. PROCESS: Process refers to the interpretation of the graphs.
3. OUTPUT: Output refers to the active participation of students and their attitudes towards the use of graphs in speaking classes.

## METHODS

The research is a qualitative descriptive research which aimed at finding out (1) whether the students speak English actively through interpreting graphs and (2) whether students have a positive attitude towards the use of graphs in speaking classes. The population of this research consisted of first-semester students in the Economics Education program at Universitas Patompo for the even semester of the academic year 2022/2023. The researcher used purposive sampling technique, selecting a total of 30 students. This research employed two instruments: observation technique and questionnaire. Observation was used to assess students' participation in speaking English, while the questionnaire was employed to gauge students' attitudes towards the use of graph interpretation in English speaking classes

## RESULTS AND DISCUSSION

Interpreting graphs can activate students to speak English, which involved asking questions, answering questions, and interpreting graphs. It was found that the majority of students have a high level of active participation in speaking English. This is evidenced by the aggregate percentage of students who are active and highly active, totaling 3.48%, calculated from the interpretation results of three types of graphs.

The following data presents students' participation in speaking English through the interpretation of pie charts, line graphs, and bar graphs.

**Table 1a.** Student participation in speaking English through interpreting pie charts.

| Number of students | Asking questions | Responding questions | Interpreting graphs | Total of frequency |
|---|---|---|---|---|
| 30 | 46 | 30 | 24 | 100 |

| | |
|---|---|
| Mean | 3.33 |

Table 1a. shows that the total frequency of student speaking is 3.33%, categorized as active. There is 1 student (3.33%) out of 30 students who obtained zero speaking frequency, 3 (10%) students obtained speaking frequency once (less active), 6 (20%) students obtained speaking frequency twice (moderate), 3 (10%) students obtained speaking frequency three times (active), and 17 (56.67%) students obtained speaking frequency four times or more (highly active).

**Table 1b**. Time spent in speaking English through interpreting pie charts.

| Students' participation | Duration in minute | percentage % |
|---|---|---|
| Asking questions | 11'30" | 19.6% |
| Responding questions | 13'30" | 22.5% |
| Interpreting graphs | 20'00" | 33.33% |
| Being silent | 15'00" | 25% |
| | 60'00" | 100% |

Table 1b shows that in interpreting pie charts, students spent more time in speaking English. The analysis indicated that 11 minutes and 30 seconds (19.16%) are spent on asking questions, 13 minutes and 30 seconds (22.5%) are spent on answering questions, 20 minutes (33.33%) are spent on interpreting the graph, and the rest is spent in silence. The time is then calculated to be 44 minutes and 10 seconds (74.99%) spent by students speaking English, and it can be estimated that each student spends 1 minute and 5 seconds speaking English.

**Table 1c.** Students' participation in speaking English through the interpretation of line graphs.

| Number of students | Asking questions | Responding questions | Interpreting graphs | Total of frequency |
|---|---|---|---|---|
| 30 | 38 | 33 | 28 | 99 |
| Mean | | | | 3,33 |

From Table 1c, the total frequency of student speaking is 3.3, categorized as active. There are 9 students (30%) out of 30 students who obtained speaking frequency twice (moderate), 12 (40%) students obtained speaking frequency three times (active), and 9 (30%) students obtained speaking frequency four times or more (highly active).

**Table 1d.** Time spent speaking English through the interpretation of line graphs.

| Students' participation | Duration in minute | percentage % |
|---|---|---|
| Asking questions | 08'55'' | 9,9% |
| Responding questions | 11'02'' | 12,25% |
| Interpreting graphs | 42'35'' (62'32'') | 47,31% (69,46%) |
| Being silent | 27'28'' | 30,51% |
| | 90'00'' | 100% |

Based on Table 1d, it is evident that in interpreting line graphs, students spend more time speaking English. The analysis shows that 8 minutes and 55 seconds (9.90%) are spent on asking questions, 11 minutes and 2 seconds (12.25%) are spent on answering questions, and 42 minutes and 35 seconds (47.31%) are spent on interpreting the graph. Therefore, students spend a total of 62 minutes and 32 seconds (69.46%) speaking English. Each student spends approximately 2 minutes and 8 seconds speaking English.

**Table 1e.** The Students' participation in speaking English through the interpretation of bar graphs.

| Number of students | Asking questions | Responding questions | Interpreting graphs | Total of frequency |
|---|---|---|---|---|
| 30 | 62 | 29 | 24 | 115 |

| | |
|---|---|
| | 3,83 |

From the collected data, the total frequency of students speaking English is 115 times, with a mean of 3.83, categorizing them as highly active. The analysis indicates that out of 30 students, 1 student (3.33%) obtained zero speaking frequency (inactive), 3 students (10%) obtained speaking frequency once (less active), 3 students (10%) obtained speaking frequency twice (moderate), 4 students (13.33%) obtained speaking frequency three times, and 9 students (30%) obtained speaking frequency four times or more (highly active).

**Table 1f.** Time spent speaking English through the interpretation of bar graphs.

| Students' participation | Duration in minute | percentage % |
|---|---|---|
| Asking questions | 17'20'' | 19,6% |
| Responding questions | 14'25'' | 16,01% |
| Interpreting graphs | 23'15'' | 25,83% |
| Being silent | 35'00'' | 38,89% |
| | 90'00'' | 100% |

From Table 1f, it is apparent that in interpreting bar graphs, students spend more time speaking English. The analysis indicates that 17 minutes and 20 seconds (19.26%) are spent on asking questions, 14 minutes and 25 seconds (17.01%) are spent on answering questions, and 23 minutes and 15 seconds (25.83%) are spent on interpreting the graph. Therefore, students spend a total of 55 minutes (61.01%) speaking English through the interpretation of bar graphs. It can be estimated that each student spends approximately 1 minute and 83 seconds speaking English.

2. Students' attitudes toward the use of graphs in speaking class

**Table 2a.** The mean score collected through questionnaire

| Number | Range of score | Classification |
|---|---|---|
| 1. | 61-75 | Strongly agree |
| 2. | 46-60 | agree |
| 3. | 31-45 | Rather agree |
| 4. | 16-30 | disagree |
| 5. | 0-15 | Strongly disagree |

$$\bar{x} = \frac{\sum x}{N}$$

$$= \frac{1712}{30}$$

Mean= 57.06

From the collected data, the total score of the students is 1712, and there are 30 students, which means the average score is 57.06. Based on this consideration, the mean ($\bar{x}$) ranges between 46 and 75, which falls into the positive category. In other words, students have a positive attitude towards the use of graphs in speaking classes.

**Table 2b.** The Frequency of students' score through questionnaires

| Students' attitude | Total |
|---|---|
| Strongly agree | 11 |
| agree | 17 |
| Rather agree | 2 |
| disagree | 0 |
| Strongly disagree | 0 |

The data from table 2b shows that 11 (36.67%) out students strongly agree, 17 students (56.67%) agree, 2 students (6.66%) somewhat agree, and none of them disagree or strongly disagree with the use of graphs in speaking classes.

**Discussion**

1. observation checklist

The data from tables 1a, 1c, and 1e indicates that the total frequency of asking questions is 146 (higher frequency). Through this participation, it was found that many students still did not fully comprehend the meanings of the words found in the graphs; in fact, they wanted to understand why the cases depicted in the graphs occurred.

The total frequency of Responding questions, based on tables 1a, 1c, and 1e, is 92. In this participation, it was observed that some students had understood the graphs and attempted to answer the questions.

The total frequency of interpreting the graphs, based on tables 1a, 1c, and 1e, is 76. There were some students who did not interpret the graphs; they only asked and answered questions. Even in this category of participation, where the level is considered moderate, many students still could not speak with a good structure, hesitated speak out about their interpretations and inhibition. Some students were not interested in the topic of the graph.

2. Questionnaires

Based on the students' scores, it can be concluded that graph interpretation can be implemented in speaking classes. The data shows that 11 students (36.67%) strongly agree, 17 students (56.67%) agree, 2 students (6.66%) somewhat agree, and none of them disagree or strongly disagree with the use of graphs in speaking classes. The average score is 57.06 (positive attitude).

Based on the description, the researcher found that students have a positive attitude towards the use of graphs in speaking classes. Related to the theory stated previously the language used is at a level acceptable to the students.

**CONCLUSION**

Based on the research findings, it can be concluded that first-semester students of the Economics Education study program at Universitas Patompo speak English actively through interpreting graphs. Furthermore, students are also motivated and have a positive attitude towards the use of graph interpretation in English language learning. Therefore, it can be inferred that the use of graphs in English teaching can enhance students' speaking proficiency

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