

The application of concept-based teaching towards improving HUMG students' speaking skills

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ABSTRACT

This study is concerned with the application of Concept-Based Teaching towards improving HUMG students' speaking skills. This method aims to facilitate the development of student understanding, and helps them speak English well through accessing particular concepts. Speaking is the key of communication so lecturers should be able to guide students to analyze and connects their knowledge and skills to apply in different situations. Final results show that this teaching method helps boost HUMG students' speaking confidence and spark their curiosity. Students feel more confident in public speaking, because of their willingness and improved logical thinking ability, and curiosity is critical to make students passionate about learning and open to others' perspectives. The continuous learning helps students unlock a world of opportunities and make them more competitive and versatile professionals.

Keywords: concept; cognitive; experience; knowledge; concept-based teaching

1. Introduction

At Hanoi University of Mining and Geology (HUMG), English is taught as the foreign language, HUMG students, particularly who are non-English speaker, must develop strong speaking skills to succeed in their studies and future careers. Traditional methods of teaching English often focus on rote memorization (Jean Piaget, 1956) and passive reception (John Dewey, 1938) of information, which may not effectively enhance speaking abilities. Traditional education was critiqued for not leveraging the potential of collaborative learning and the importance of the social context in cognitive development (Lev Vygotsky, 1986). We teach our students to know (for knowledge or facts) and do (for skills). Only learning discrete knowledge and skills is not always engaging, relevant, challenging or significant. Besides mastering knowledge and skills, students must be able to apply their understanding and skills to complex situations and contexts, some of which are yet to be envisioned. Students must learn to understand things (for concepts) because knowledge and skills are which that are locked into a specific situation, concepts are timeless, abstract, universal, and transferable.

Concept-Based Teaching (CBT), which emphasizes understanding underlying principles and concepts, offers a promising alternative. This paper explores the impact of CBT on HUMG students' English speaking performance, positing that it leads to more meaningful and effective language acquisition. Lecturers can get students to think at greater depths. In order to truly understand a concept, students have to apply, synthesize and evaluate rather than rote memorization.

Every student has probably experienced a concept once in their life. Concepts are broad, timeless, universal and abstract. They are accessible to everyone and connect us to one another. A student inquiry can take many different routes and even if they use the same concept each and every time, the way they find it and the destination will be completely different. It is a journey that requires dedication, practice, and resilience. These qualities extend beyond language learning, fostering personal growth and a lifelong love of learning. After categorizing and explaining the process of learning a concept, they could practice thinking and linking between different events and data to form their own concepts of understanding. Once they have a firm grasp on these concepts, it's time for them to proceed on to more complex topics. It might range from light talk or a brief introduction to more complex topics like a discussion of their perspectives on a certain issue or phenomena. If the researcher invites them to participate in interactive activities that foster oral communication skills development, they will be more likely to generate more ideas. This process is a gateway to cognitive enhancement, cultural enrichment, and personal fulfillment.

2. Literature review and research methodology

2.1. Literature review

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2.1.1. Concepts and the organization of conceptual structure

A concept is a mental representation or a cognitive construct that helps in understanding, categorizing and communicating complex information. Words symbolize concepts, and concepts are the units of meaning (Croft & Cruse, 2004, p. 7). Words and their corresponding concepts relate to each other in different systems. In order to understand the meaning of a word, language users need to access to all the essential knowledge that relates to that word. Concepts are the fundamental building blocks in the process of thinking and are used to organize and make sense of experiences and observation. There are some characteristics of concepts: abstract, timeless, universal and transferable.

Concepts are not tied to specific instances but represent general ideas or categories. They exist in mind as ways of understanding and interpreting world. The profile refers to the concept symbolized by the word in question. Langacker (1987) explained the term profile is also used to define the relationship between a word form and a word meaning. For example, one can understand radius only against a background of understanding of the concept circle. The relationship of them is compared as the relationship between a profile and a frame, which is represented in the conceptual structure. A concept profile is insufficient to define a word concept but a single frame or base such as circle that includes a wide range of concept profiles, such as radius, arc, center, chord...

Lines/physical qualities need only one dimension, circle needs two dimensions, and space involves three dimensions. A concept may presuppose several different dimensions at once, which include a domain matrix as in the concept such as human being person – body – soul. The physical space (PS) is the unlimited expanse of the universe, abstract space (AS) is a hypothetical space and in linguistics, mental space (MS) are established in real time in discourse and are stored in the short-term memory of the speakers. Language enables us to build a mental picture of reality, and the principles of abstract reasoning evokes from visual thinking and mechanisms for representing spatial relations.

Categorization is a natural act of human cognitive activities. It involves the apprehension of some individual entities or particular experience as an instance of something (Croft & Cruse, 2004, p. 74). The cognitive tool used in categorizing concepts into different categories is called a conceptual category. This tool is based on the most salient features for some specific purposes like learning, communication and economy. Because all the members of a category do not have the same status, members are judged as the best example of a category must be the most prototypical and central in the category. An example of these levels is like from fruit (superordinate), apple, grapes, oranges (basic) to mackintosh apple, green seedless grapes (subordinates).

2.1.2. Concept-based teaching

In the context of language learning, CBT shifts the focus from isolated vocabulary and grammar exercises to the understanding of linguistic and communicative concepts. This approach helps students grasp the ‘why’ and ‘how’ behind language use, leading to deeper cognitive engagement and more effective language acquisition. By understanding key concepts such as pragmatics, discourse structures, and socio-cultural norms, students can better navigate real-life communication scenarios. Speaking performance in language learning is multifaceted, involving fluency, accuracy, pronunciation, and the ability to convey and understand meaning. Fluency refers to the flow and ease of speech, accuracy to the correct use of language structures, and pronunciation to the clarity and correctness of spoken words. Beyond these technical aspects, effective speaking also requires the ability to engage in meaningful communication, considering context, audience, and purpose.

Traditional teaching methods often emphasize rote memorization (Jean Piaget, 1956) and repetitive practice of isolated language elements. While these methods can help students learn vocabulary and grammar rules, they often fall short in preparing students for the dynamic and interactive nature of spoken communication. Students may struggle to apply their knowledge in real-life situations, leading to limited speaking proficiency.

Compared to the traditional two-dimensional approach to teaching and learning that focuses only on what students know and are able to do, Concept-based teaching includes the third element of what students should understand conceptually (Erickson et al., 2017).

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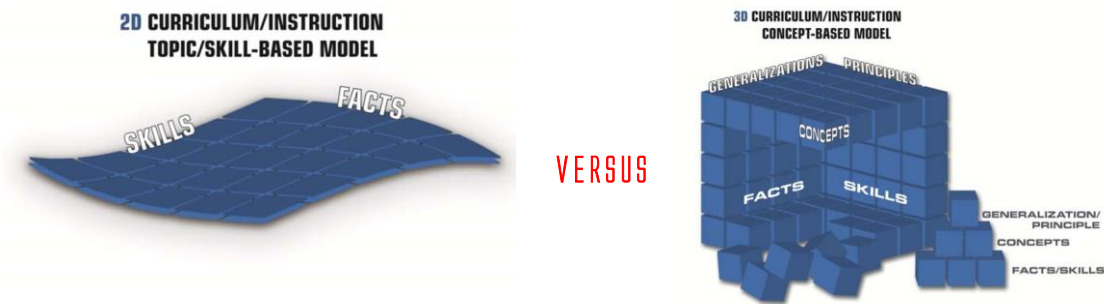


Figure 1. Two-dimensional and three-dimensional curriculum and instruction (Erickson, 2008)

Figure 1 shows that Concept-based teaching (CBT) focuses on teaching students underlying principles and concepts rather than isolated facts. It is an opportunity for students to make sense of things with what they are learning to the connections between various fields. In the context of university students learning English, CBT can significantly impact their speaking performance in several ways: Concept-based teaching can significantly enhance university students' English speaking performance by promoting a deeper understanding of the language, encouraging critical thinking, providing contextual learning, fostering transferable skills, increasing engagement, ensuring long-term retention, and facilitating collaborative learning (Erickson et al., 2017).

2.1.3. Student learning processes

The student learning process is a multifaceted that encompasses acquiring knowledge, developing skills, and cultivating critical thinking abilities. It is an active engagement with the material, where students do not merely absorb information passively but interact with it through questioning, application, and reflection. This interaction is essential for deep understanding and long-term retention (Jean Piaget, 1956). The process begins with gaining new information, which can be facilitated through various methods such as lectures, readings, multimedia resources, and experiences. Effective teaching methods help to present the information in an accessible and engaging manner. It is necessary for lecturers to use a variety of pedagogical strategies to cater to different learning styles and needs. Once exposed to new material, students must actively process and internalize it. This stage often involves a combination of different processes including memorization, comprehension, and critical analysis.

Students must try to memorize the facts and concepts at first then they need to understand the meaning and significance of the information, making connections to prior knowledge and real-world applications (John Dewey, 1938). It is about how students construe the world, how they categorize things into different groups and layers by using the tool called conceptual category. When students feel free to give their own viewpoints, they can build different thinking skills as critical analysis which involves evaluating the information, questioning assumptions, and considering alternative perspectives. This higher-order thinking is crucial for developing problem-solving skills and the ability to apply knowledge in novel situations. Additionally, collaborative learning opportunities, such as group projects and discussions, can enhance understanding by allowing students to share insights and challenge each other's thinking. Intrinsic motivation plays a significant role in the student learning process. When students are intrinsically motivated, they engage in learning activities out of genuine interest and enjoyment, rather than external rewards or pressures. This type of motivation is often linked to a growth mindset, which is the belief that abilities and intelligence can be developed through effort and perseverance.

Assessment and reflection are integral components that provide feedback and promote self-awareness. Formative assessments and summative assessments align with learning objectives and provide meaningful information about student performance. The student learning process is also influenced by external factors (Lev Vygotsky, 1986) such as socioeconomic status, cultural background, and access to resources, it is about reflection which allows students to think deeply about their experiences, understand their learning strategies, set goals for future improvement and a pursuit of lifelong learning which is the ultimate goal of the student learning process. Finally, the student learning process is a continuous path of growth, fostering both academic and personal development, turning students into lifelong learners who are curious, adaptable, and proactive in seeking out learning opportunities.

2.2. Methodology

2.2.1. Participants

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In one session, fifteen HUMG students were selected at random following two English language modules. Non-native speakers are among the participants. Most of them were second-year students, whose ages ranged from 19 to 20. They come from a variety of majors, including chemical engineering, business administration, oil and gas processing, and information technology. They belonged to the experimental group (EG) and participated in all sessions of training. The other fifteen students in another class experienced the conventional method (CG).

2.2.2. Procedures

The researcher gave the participants in the experiential group two activities. In order to compare the results with each other and the post-test results after it was completed, both the EG and CG groups had to first complete an oral speaking pre-test. The stability of the experimental group was marked by how much a student could discuss a topic. The concept-based teaching method was carried from the beginning of the first lesson in EG. This process lasted about three months before the post test.

The oral test was about discussing a specific topic related to a healthy lifestyle, environment, socioeconomic status, etc. during classes. The quality of their talks and presentations, as well as the five speaking criteria, were taken into account while grading their performances. They had to respond, think, and feel about a certain subject this time. Pronunciation, grammar, vocabulary, fluency, and comprehension were the five distinct speaking criteria used to grade each performance.. After that, they went to the process of checking and assessment.

2.2.3. Data analyzing technique

After collecting the data, the researcher classified the data into two groups as follow:

2.2.3.1. Analyzing quantitative data

Students' speaking skills would be improved if classroom action research was successful. We observed that students felt motivated and enjoyed learning when they could do the test in the classroom. Using descriptive statistics, the researcher calculated the mean of the pre-test and the post-test, then analyzed the results. A study was conducted to determine if there was a difference between students' speaking skills before and after the intervention.

Calculating the mean of a pre- and post-test can be done using the following formulas:

$$\bar{X} = \frac{\sum X}{N} \quad \text{Where: } \bar{X} = \text{means of pre-test scores}$$

$$\bar{Y} = \frac{\sum Y}{N} \quad \bar{Y} = \text{means of post-test scores}$$

$$\quad \quad \quad N = \text{the number of sample}$$

$$\quad \quad \quad (\text{Puspita, 2007: 69})$$

2.2.3.2. Analyzing qualitative data

The researcher used Interactive Model of Data Analysis as propounded by Matthew, B. Mile and A. Huberman (1994). This approach consists of four interrelated processes: gathering and reducing data, displaying data, and deriving and verifying conclusions. Initially, the pre-test data for groups EG and CG were recorded. Secondly, the information gathered from the post-test (EG and CG) was recorded. The means of each group and procedure were then determined using the previously mentioned formulas. Tables and charts were then created to display the variations between the two procedure groups. Ultimately, discussions about the outcomes and achievements took place.

3. Findings and discussions

3.1. Boosting Humg students' speaking confidence

From observation, the author realizes that when students deeply understand the concepts, they can learn and remember the word meanings as effectively as possible. This leads to the faster process of gaining new knowledge and things. If the students are familiar with the process of forming concepts, they can develop their thinking abilities, they would be able to build their critical, logical and creative thinking to achieve a successful communication. Basing on this angle, students feel more confident in public speaking, which helps them improve their speaking skills as well. Finally, it promotes inclusivity, breaking down social barriers and building a sense of community.

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3.2. Sparking curiosity in HUMG students

From students' speaking scores and logical inferences, it became evidence that the desire to seek out new knowledge and learn how things work demonstrates that students want success, which leads to creativity and discoveries. Concept-based teaching also enables students to deepen their knowledge of a certain subject. It provokes student prior knowledge and continues to expand their knowledge year after year. Questions spark curiosity which is closely linked to brain development and cognitive growth. When students know how to ask the right questions, they begin to see possible solutions where problems currently exist. It is a natural human trait that drives us to learn and discover new things. Lastly, curiosity is critical to make students passionate about learning and open to others' perspectives. It is one of the most important qualities of good learners, which brings success in education.

3.3. Improving HUMG students' speaking skills

From the tests, it was concluded that the concept-based teaching improved students' speaking skills. They felt confident to speak because of their willingness and improved logical thinking ability. There were some indicators that demonstrated an improvement in their speaking skills. They were pronunciation, grammar, vocabulary, fluency and comprehension. A scale of 0 to 5 for each indicator and the total numeric score for all indicators is out of 25. The students' speaking scores improve from the pre-test to the post-test for both groups as shown in the following table:

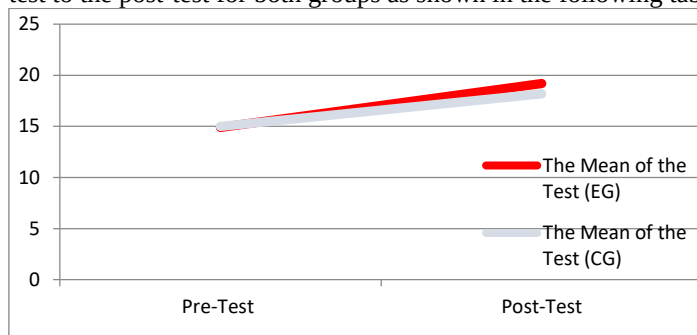


Table 1. The mean scores of each group.

Test	EG	CG
Pre-test	14.9	15
Post-test	19.2	18.2

Figure 2. The mean scores of the test.

The increase of students' mean score in EG from 14.5 in the pre-test to 19.3 in the post-test, and that in CG from 14.7 to 17.5 showed that there was an improvement of students' speaking result before and after the application of the concept-based teaching method.

4. Conclusion

HUMG students can be more active and readier to speak, to share their deeper thoughts after the use of the concept-based teaching method. CBT also bolstered students' motivation with logical reasoning, and their messages became more persuasive. It also enhances cognitive abilities, which helps students develop their interpersonal, problem-solving, and decision-making skills. The reticent students were also encouraged to discuss a topic because they had been enticed to immerse themselves in interactive and engaging activities, their curiosity was woken then they were more confident to share their thoughts. After all, their autonomy, discipline, and perseverance were cultivated, and they had chance to get more experience from their speaking, even their mistakes and defense. Concept-based learning encourages students learning across, they can connect their knowledge and skills between different subjects. By observation during classes, the researcher could realize that the other skills were also developed such as: self-awareness and self-motivated, which make students embrace lifelong learning to empower them to excel in their careers and enriches their personal experiences, foster innovation, and cultivates resilience. The continuous learning helps students unlock a world of opportunities and make them more competitive and versatile professionals.

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TÓM TẮT

Ứng dụng phương pháp giảng dạy dựa trên khái niệm nhằm nâng cao kỹ năng nói của sinh viên Trường Đại học Mở - Địa chất

Nghiên cứu này tập trung vào việc áp dụng phương pháp giảng dạy dựa trên khái niệm nhằm để cải thiện kỹ năng nói Tiếng Anh của sinh viên Trường Đại học Mở - Địa chất. Phương pháp này nhằm hỗ trợ nâng cao vốn hiểu biết của sinh viên, và giúp các em nói tiếng Anh thành thạo thông qua việc tiếp cận một số khái niệm cụ thể. Kỹ năng nói là chìa khóa của giao tiếp, vì vậy giảng viên nên hướng dẫn sinh viên cách phân tích và kết nối lại giữa kiến thức và kỹ năng để áp dụng vào các tình huống khác nhau. Kết quả cuối cùng mang lại cho thấy phương pháp giảng dạy này giúp tăng cường sự tự tin nói tiếng Anh và khơi dậy trí tò mò, ham hiểu biết của sinh viên HUMG. Qua quan sát cho thấy các em cảm thấy tự tin hơn khi phát biểu trước đông người nhờ tâm thế sẵn sàng và khả năng suy nghĩ logic tốt hơn, trong khi trí tò mò, ham hiểu biết là yếu tố quan trọng giúp sinh viên tích cực học hỏi và cởi mở với các quan điểm khác nhau. Việc học hỏi không ngừng giúp sinh viên mở ra một thế giới nhiều cơ hội và biến các em trở thành những nhà chuyên môn uyên bác và linh hoạt hơn.

Từ khóa: khái niệm; nhận thức; kinh nghiệm; hiểu biết; giảng dạy dựa trên khái niệm.

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