



Implementation of Nggahi Rawi Pahu Philosophy Through in Chemistry Learning Based on Social Cognitive Theory for Student Character Strengthening

Nurfidianty Annafi*, Putu Budi Admyana, I Wayan Suastra, I Made Sutajaya, I Nyoman Tika, I Gede Astra Wesnawa

Department of Chemistry Education, Universitas Nggusuwaru Bima, Indonesia

Ganesha University of Education, Singaraja, Indonesia

* Corresponding Author e-mail: nurfidianty89@gmail.com

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Abstract

Social cognitive theory developed by Albert Bandura is the most influential approach to learning. This theory emphasizes that a person's behavior can be learned through observation of social models in the surrounding environment, be it teachers, parents, or peers. This theory is known as observational learning or modeling. This research aims to explore the process of observational learning in an effort to strengthen the value of the Nggahi Rawi Pahu philosophy. The research method used is descriptive qualitative. The sample in this study were fourth semester students of the Chemistry Education Study Program. Data collection techniques were carried out by means of observation, administration of questionnaires and documentation. In this study, observational learning was carried out through 4 stages of cognition in the learning process, namely attention, retention, motor reproduction and motivation. 7 out of 10 students showed a positive response to the relevance, involvement and benefits of observational learning in an effort to strengthen the philosophy of Nggahi Rawi Pahu. This shows that through observational learning the value of the Nggahi Rawi Pahu philosophy can be improved.

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INTRODUCTION

Social cognitive theory developed by Albert Bandura is the most influential approach to learning. Albert Bandura developed his theory in 1977 by emphasising the importance of the interaction between cognition, behaviour and the environment. The theory encompasses a range of concepts that explain how individuals develop and maintain behaviour, as well as how they are affected by the social environment around them. According to Bandura, the cognitive aspect plays an important role in learning because it is able to cognise external stimuli into the mind. As Bandura (1977:12) based on the results of his experiments explained that 'everything that can be learnt from direct experience can also be learnt through indirect or substitute experience'. The concept of social cognitive theory is known as observational learning (modelling). Where behaviour is formed from the results of observing and imitating. According to Bandura (1977) humans learn mostly through direct observation and remembering the behaviour of others.

According to Adi, (2020) in the theory of Behaviorism, Albert Bandura states that students will do learning by getting to know the model's behaviour which will later be imitated, then students will consider imitating which will become their own behaviour. This theory

emphasises that a person's behaviour can be learned through observation of social models in the surrounding environment, be it teachers, parents, or peers (Sumianto, 2024).

The benefits of observational learning (modelling) can be effectively obtained when cognitive responses allow a person to regulate their own behaviour (Dahar, 1988). Therefore, by observing, individuals can store the information in memory and assimilate the information by considering which information to choose to produce. There are four basic components in the observational learning process (Hill, 2011), namely attention, retention, reproduction and motivation.

Social cognitive theory is one of the theories that support character building through an understanding of social values. In shaping a person's character, a figure or example is needed that can be a role model and serve as a model that can be imitated by the individual. Lickona (1991) explains that there are three elements in character building, namely moral knowledge, moral feelings and moral actions. Therefore, realising a nation's generation with character is the goal of national education. Article 3 of the National Education Law No. 20 of 2003 explains that the purpose of national education is to develop the potential of students to become human beings who are faithful and devoted to God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens.

Based on this, the government seeks to instil character education by implementing it in the field of study at school with the aim of fostering the character of students (Indriani, N., & Suryani, I., 2023). Indriani (2023) stated that one of the priorities in Merdeka Belajar is character education. Where culture is the foundation of character education. Culture and education have a mutually influencing relationship. Syam (1988) states that knowledge is an element of culture.

Bima culture is still thick with the requirements of moral values. Bima's local culture is the result of the Bima community's habituation as part of Bima's local wisdom that is done repeatedly and continuously. According to Sawaludin (2023) local wisdom is interpreted as noble values and is characterised by the attitude of citizens who reflect civis culture, such as religious values in the form of the value of divinity, kinship, responsibility, mutual respect, social care, democracy, mutual cooperation, participation, solidarity and environmental care.

One of the philosophical concepts in Bima culture that has moral values and is in line with the concept of character education is Nggahi rawi pahu. Nggahi Rawi Pahu means harmony between words and actions. In Bima language, Nggahi means words, rawi means action and pahu means appropriate or in harmony. This reflects that what is done and said or what has been agreed together will be implemented wisely, so that it gives very positive results (Lestari & Astuti, 2023). Therefore, Nggahi Rawi Pahu can be interpreted as one of the manifestations of a consistent attitude in the life of the Bima people. In this developing era, the moral values of local culture are increasingly abandoned. Therefore, learning that instils cultural values is needed to maintain and maintain the value of national character. In an effort to strengthen the value of the Nggahi Rawi Pahu philosophy, it can be applied through social cognitive learning.

Nggahi rawi pahu culture is a local wisdom of Bima people that plays an important role in regulating behaviour and interaction patterns in life. Including in the learning environment. One of the character values reflected in the Nggahi rawi pahu culture is honesty, which is the courage to reveal the truth. In chemistry learning, honesty is one of the scientific attitudes in conducting investigations. Chemistry learning is inseparable from an investigation that is carried out scientifically. In an effort to strengthen the value of the Nggahi Rawi Pahu philosophy, it can be applied through social cognitive learning. Through the Implementation

of the Nggahi Rawi Pahu Philosophy in Chemistry Learning Based on Social Cognitive Theory, it is hoped that it can support character building through an understanding of these social values.

Based on the description above, the purpose of this study is to describe the observational learning process in an effort to strengthen the value of the Nggahi Rawi Pahu philosophy.

METHOD

The research method used is qualitative descriptive. This method is a research method that collects and analyses in the form of word narratives (Magfiroh, 2016). This method was chosen because it can explore and describe more deeply the value of the Nggahi Rawi Pahu philosophy implemented through observational learning. According to Cresswell (2023) this approach provides space for researchers to explore more deeply the perspectives of participants.

This research was conducted at Nggusuwaru University in Bima. The sample in this study were fourth semester students of the Chemistry Education Study Programme. The sample selection was carried out using purposive sampling technique because they took Microteaching courses. This microteaching course is designed to train prospective chemistry teachers to develop teaching competence.

Data collection techniques were carried out by means of observation, administration of questionnaires and documentation. Observations were made to observe the behaviour between lecturers and students in the observational learning process and the reflected Nggahi Rawi Pahu values. While the questionnaire was given in two stages. Stage 1, the questionnaire was used to explore observational learning. And stage 2, to find out the values of the Nggahi Rawi Pahu philosophy reflected through observational learning.

Analysis of research data was analysed descriptively related to the depth and accuracy of the findings so as to provide knowledge and understanding of the Implementation of the Nggahi Rawi Pahu Philosophy in Chemistry Learning Based on Social Cognitive Theory is expected to support character building.

RESULTS AND DISCUSSION

The application of social cognitive learning theory known as observational learning or modelling in this research is applied in Microteaching courses. The main objectives of this research are: 1) explore the observational learning process 2) describe student perceptions of the implementation of the Bima Nggahi Rawi Pahu philosophy through observational learning. The implementation of the Nggahi Rawi Pahu philosophy through social cognitive learning known as observational learning or modelling in this study was applied to the Microteaching course. Where the topic of discussion includes models of teaching skills, skills to open and close learning as well as apperception and motivation. In observational learning, the course lecturer acts as a role model for students in visualising these teaching skills. Social cognitive theory is based on the process of knowledge acquisition or learning that directly correlates with model observation. The basic principle of learning according to social cognitive theory is that what individuals learn, especially in social and moral learning occurs through imitation and modelling (modeling) (Mujahidah & Yusdiana, 2023).

According to Bandura (1977), a model is a pattern or example given to others to illustrate how someone behaves. Social cognitive theory explains that knowledge can be obtained from observing others in the context of social interaction, experience, and the influence of external

media (Zou & Brown, 2015). Three basic models of observational learning according to Bandura (1977):

1. Live models, through demonstration or acting out a behaviour
2. Symbolic models, through the role of characters in books, films, television programmes or online media
3. Verbal instructional models, through explanation and description of a behaviour.

Exploration of the observational learning process

Exploration of the learning process is done through direct observation and survey methods. Observational learning is carried out through 4 stages of cognition in the learning process, namely attention, retention, motor reproduction and motivation (Gredler, 1992).

Attention

At this stage, the lecturer acts as a live model who demonstrates the techniques or skills needed in teaching, starting from opening the lesson, core activities, to closing the lesson. The aspects of skills demonstrated are pedagogic competence, professional competence, personality competence and social competence that must be possessed by prospective teachers.

At this stage, the lecturer acts as a model and students act as learners. While the material studied is high school chemistry with thermochemical material. The model demonstrates the techniques or skills needed in teaching, starting from opening lessons, core activities, to closing lessons. The aspects of the skills demonstrated are pedagogic competence, professional competence, personality competence and social competence that must be possessed by prospective teachers.

Based on the observation, most of the students enthusiastically paid attention to the examples demonstrated by the lecturers during the learning activities. This is reflected in the attitude of students who look very focused on their observation activities. Especially when the model explained the subject matter, students were seen listening to the explanation of the model.

As an effort to apply the moral message of the Nggahi Rawi Pahu philosophy, the model instils personality and social competence during learning. Instilling discipline in managing time, responsibility for delivering material well, neat in dress and speech. Flexible in responding to students, and able to have the soul of a leader. The attitude reflected in the modelling of personality competence and social competence is a moral message from the Nggahi Rawi Pahu philosophy.

Retention

After students pay attention to the behaviour of the lecturer as a model, a questionnaire is given to find out their understanding of the examples that have been demonstrated by the model related to the methods, techniques and skills needed in teaching. This questionnaire aims to determine whether students retain information and process it into their cognitive processes.

During the learning process, the model asked questions such as how do exothermic and endothermic reactions occur? It can be seen that 6 out of 10 students were able to answer the questions given. This shows that the information obtained is recorded in memory and cognitive synthesis occurs which is processed in their brains.

Reproduction

In the next meeting, students practise the techniques and methods that have been learnt previously in accordance with the material topics that have been given. The goal is to

determine the ability of students to reproduce or imitate the behaviour that has been observed. Based on observations, students' abilities depend on the physical and cognitive skills of each individual.

The conditions reflected in this reproduction stage show that students are able to imitate and demonstrate pedagogic, social and personality competencies that have been studied previously. Almost all chemistry education study programme students in semester IV were able to open the lesson well. Such as greeting, leading prayers, and taking attendance. This shows that most students are able to process the information obtained and produce it through these skills. However, only 7 out of 10 students were able to deliver apperception and motivate other participants well. This means that not all students have the same cognitive abilities.

In the core activity stage: students have different ways of designing learning including some using inquiry learning models, PBL, PjBL, discovery learning, learning cycle and cooperative learning. In addition, students also use various learning tools/media. From the observation, 8 out of 10 students were able to imitate pedagogic competence as demonstrated by the model. One of the activities shown was providing opportunities for other participants to be actively involved, being able to adjust the intonation of the tone of voice, travelling around the class, being able to manage time well and mastering the technique of providing rewards and punishments.

Similarly, when ending the lesson, students are able to demonstrate how to invite other participants to jointly conclude the lesson, provide follow-up according to topics that increase student mastery with clear and correct language. The ability of students to display and demonstrate teaching techniques shows that observational learning activities are successful.

Motivation

The motivation stage is one of the important factors for successful learning. This is because even though a person has learned a certain behaviour, they may not carry it out without motivation. Providing motivation can influence an individual's decision to act on what they have learnt.

At the end of the lesson, the model provides reinforcement to motivate students to emulate or practice pedagogic, professional, personality and social competencies in teaching practice. Reinforcement is given in the form of rewards and consequences that will be received if students are unable to master the four competencies. In addition, motivation is given through advice such as the importance of discipline in managing time, responsibility for delivering material well, neat in dress and speech. Flexible in responding to students, and able to have the soul of a leader. Giving advice is one of the efforts to instil moral messages from the Nggahi Rawi Pahu philosophy.

Based on the questionnaire results in stage 1, it shows that observational learning makes the learning process more interesting, helps students understand the meaning of the Nggahi Rawi Pahu philosophy, can increase self-efficacy, helps in understanding concepts, makes the learning process more useful, makes more courageous skilled in front of the class, the learning process becomes easier to understand, more meaningful and relevant to the objectives of the microteaching course. In addition, through observational learning, students can develop teaching abilities and skills by imitating the concepts that have been demonstrated by the model. This makes students more enthusiastic and motivated.

Students' perceptions of the implementation of the Bima Nggahi Rawi Pahu philosophy

Students' perceptions of the implementation of the Bima Nggahi Rawi Pahu philosophy in observational learning were obtained through student response questionnaires. Based on the

survey results through student response questionnaires in stage 2, it is known that 7 out of 10 students who filled out the questionnaire showed a positive response to learning. Students' responses show that social cognitive learning is relevant and provides benefits in an effort to strengthen the philosophy of Nggahi Rawi Pahu.

Etymologically, 'Nggahi' means expression, 'Rawi' means deed or action, and 'Pahu' describes the form or real evidence shown. The concept of Nggahi Rawi Pahu means that something that is said must be realised in concrete action (Malik, et al., 2024). According to Misdiatun, et al (2019), Bima people describe Nggahi Rawi Pahu as one of the manifestations of a consistent attitude in life. Many students ignore the message of the Nggahi Rawi Pahu Philosophy because they see that these values are too rigid and considered outdated. Along with the times, people are more easily influenced by the values that develop in this digitalisation era. Therefore, observational learning is an alternative to strengthen the value of the Nggahi Rawi Pahu philosophy.

Based on the survey results, it is known that the Nggahi Rawi Pahu cultural values reflected through observational learning are 1) Work hard to be able to imitate the behaviour that has been exemplified. 2) Dare to appear to carry out teaching practice. 3) Creative in managing learning. 4) Discipline in using time according to the time allocation provided. 5) Responsible for carrying out teaching practice properly. 6) Obedient to the rules and advice given by the model. 7) Honest in giving assessment. 8) Consistent in providing objective assessment. 8) Tolerance of student attendance for certain reasons.

This attitude reflects the strengthening of Bima's cultural values. This is included in the practice of Pancasila values and student character values. Bima culture is closely related to the requirements of values that form individuals with character, but it is starting to fade in this digitalisation era. Instilling character values is a shared responsibility of both school and community members. The curriculum of the national education system already contains cultural values and noble values of the Indonesian nation. Because the purpose of national education boils down to the formation of a civilised culture (Thoib, 2008). In an effort to instil character education in the educational environment, observational learning can be one solution. Hadi (2020) reinforces that learning oriented towards role model observation can improve character education if its implementation is carried out consistently and supported by a good system.

CONCLUSION

Based on the analysis presented, it can be concluded that observational learning can strengthen the value of the Nggahi Rawi Pahu philosophy. Most students showed a positive response to the relevance, involvement and benefits of observational learning in an effort to strengthen the philosophy of Nggahi Rawi Pahu. Students showed an attitude of courage, creativity, discipline, responsibility, honesty, consistency, tolerance and hard work during the learning process.

RECOMMENDATIONS

Based on the findings of this study, further research is recommended:

1. Research is needed at the junior and senior high school levels
2. Quantitative research is needed to measure the effectiveness of learning
3. Implementation of Nggahi Rawi Pahu cultural values in various learning models
4. The use of technology in the implementation of Nggahi Rawi Pahu in learning

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