

# THE USE OF ALPHA BRAINWAVE TO DEVELOP EMPHATY AWARENESS OF VOCATIONAL SCHOOL TEACHERS IN MANAGING CLASSROOM ACTIVITIES

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## Article History:

Received: 27 October  
2021

Revised: 15 November  
2021

Accepted: 29 November  
2021

Available online: 26 December  
2021

**Abstract** - This study aims to explore the benefits of Alpha brainwaves in developing teacher empathy awareness when managing classroom activities on vocational school. The reason for the research being conducted is the fact that most of the teachers are still struggling and find it difficult to deal with students' misbehavior in the classroom because it has an impact on the overall class activities. One of the competencies that every teacher must have is social competence, namely the ability to manage social relations which requires various skills, abilities and capacities in solving problems that occur in interpersonal relationships. The significance of social competence for teachers can be felt in many social contexts. This study uses a grounded theory design with a qualitative approach that is applied to produce a theory that can explain, at a broad conceptual level, processes, actions, or interactions about substantive topics. Data collection techniques used in this study were documentation studies, participatory observation techniques; autoanamnesis interview technique; and a written assessment using a test tool in the form of the Profile of Nonverbal Sensitivity Test (PONS Test). The stages developed to apply Alpha brain waves in increasing teacher awareness of empathy are, 1) Build and Maintain Rapport; 2) Calibration; 3) Map the Brain; 4) Assertiveness Installation; 5) Drop the Anchor; and 6) Provide Feedback. Through these stages, the teacher's brain waves will be adjusted to Alpha waves, and the problems they have to solve are explored. The results of the analysis show that the proper use of Alpha brain waves can provide benefits in increasing teacher empathy awareness when they manage learning activities in the classroom.

**Keywords** - Alpha Brain Waves, Empathy Awareness, Classroom Management, Vocational School Teacher

## Introduction

Teaching is a unique profession because there are so many competencies that must be possessed in carrying out its duties to prepare future generations. A generation that, of course, has different professional and social cultural challenges from the teacher himself. The success or failure of teachers in carrying out their duties depends on them themselves. This is because the authority to design curricular programs, co-curricular and extra-curricular programs, is the authority of schools developed by teachers. Therefore, teachers must have professional competence in accordance with their field of work in order to

be able to develop a curriculum, prepare teaching materials properly, in the form of modules, textbooks and student worksheets.

At the same time, teachers must also be able to develop a dynamic learning atmosphere while respecting their students so that they are optimal in learning. In carrying out their duties, every teacher must have strong integrity in the teaching profession as well as believe that his profession as a teacher is the best choice for him. That way, the teacher can work totally for his profession, even he must also be able to convince other people to support his academic programs, both from his fellow school administrators and students.

One of the competencies that every teacher must have is social competence, namely the ability to manage social relations which requires various skills, abilities and capacities in solving problems that occur in interpersonal relationships. The significance of social competence for teachers can be felt in many social contexts. One of them is with school stakeholders, including school customers, users of school graduates, and community leaders who are very influential in the process of promoting schools.

Significance is also felt with their colleagues at school and with students whose achievements are in the hands of the teachers themselves. The students must be sent by the teachers to be able to enter the professional, social, business/entrepreneurial community, or even be able to prepare students to become entrepreneurs who really need a relationship with the wider community.

Emotions are certain feelings that are turbulent and experienced by a person and affect human life. Emotions are often connoted as something negative. In fact, in some cultures emotions are associated with a person's angry nature. Actually there are many kinds of emotions, including sadness, fear, disappointment, and so on, all of which have negative connotations. Other emotions such as happy, satisfied, happy, etc., all have positive connotations.

Emotions and feelings are two different things. But the difference between the two cannot be stated logically. Emotions and feelings are emotional phenomena that are qualitatively continuous, but have no clear boundaries. At one time an affective color can be said as a feeling but can also be said as an emotion. For example, anger is shown in the form of silence. Davis (1980) stated that emotion is "... is affective experience that accompanies generalized inner adjustment and mental and physiological stirred-up states in the individual, and that shows it cell in his overt behavior". Thus, emotion is an affective experience accompanied by adjustment from within the individual about mental and physical states in the form of a visible behavior. In another reference, emotion is a feeling or affection that arises when a person is in a situation or an interaction that is considered important by him, especially his own well-being.

To better understand the strength of emotion in the thinking brain and why feelings and reason are always ready to attack each other, we must consider how the brain grows. The human brain, weighing about one and a half kilograms consisting of cells and neural fluid, is about three times the size of the brains of our closest evolutionary relatives, non-human primates. Over millions of years of evolution, the brain has grown from the ground up, with the higher centers developing as the elaboration of the lower, more primitive parts. Various studies of brain growth in human embryos essentially trace this evolutionary journey.

The most primitive part of the brain, shared by all species that have more than just the simplest nervous system, is the brainstem that surrounds the upper end of the spinal cord. This brain root regulates the basic functions of life such as breathing and metabolism of other organs, also controlling reactions and movements in the same pattern. This primitive brain cannot be said to think or learn, but is a set of regulators that have been programmed to keep the body functioning as it should and reacting to anything that endangers survival.

From this most primitive brain root, the brain stem, the emotional center is formed. Millions of years later during the course of evolution, from this emotional region developed the thinking brain or "neocortex," that is, a large lump of wrinkled tissue that constitutes the topmost layers. The fact that the thinking brain grows out of the emotional brain region reveals a lot about the relationship between thoughts and feelings; the emotional brain existed long before the rational brain existed.

The theory of emotional intelligence was first proposed by Salovey and Mayer in 1990. They define Emotional Quotient (EQ) as, "... the ability to understand one's own feelings, to empathize with the feelings of others and to regulate emotions, which together play a role in increasing levels of emotional intelligence. someone's life."

Previously, the term emotional intelligence came from the concept of social intelligence proposed by Thorndike in 1920 by dividing 3 areas of intelligence, namely abstract intelligence such as the ability to understand and manipulate verbal and mathematical symbols, concrete intelligence such as the ability to understand and manipulate objects, and social intelligence such as the ability to perceive and manipulate objects. understand and relate to others. Until now, the theoretical concept of it is still lacking (Young, 1996). However, by conceptually integrating existing research, the role of emotional intelligence in psychology can be more easily seen. Gardner (1999) argues that emotional intelligence is related to interpersonal and intrapersonal intelligence.

Salovey places Gardner's personality intelligence in his basic definition of emotional intelligence, while expanding this ability into five main areas, namely recognizing one's own emotions, managing emotions, motivating oneself, recognizing other people's emotions (empathy), and building relationships with others.

Emotionally intelligent people are able to recognize, respond to and express the emotions of themselves and others better and more accurately. They tend to be more gifted at recognizing the emotional reactions of others, resulting in an empathetic response to them. Thus, others will see them as warm and sincere. On the other hand, people who do not have emotional intelligence are often seen as rude or shy.

Individuals are said to have emotional intelligence if they are adept at regulating emotions. This process is often used as a tool to achieve certain goals, because it can lead to the emergence of adaptive moods in others. In other words, those who are emotionally intelligent will be able to improve their own moods and the moods of others. As a result, they are able to motivate others to achieve useful goals. However, sometimes these skills are antisocial and are used to manipulate others.

Emotional intelligence can be used in problem solving. Mayer (2008) states that individuals tend to differ in the ability to regulate their emotions when solving problems. Both emotions and moods have an influence on the problem-solving strategies manifested by a person. They came to the conclusion that a positive mood allows flexibility in future planning, which allows better preparation to take advantage of future opportunities. In general, individuals with an optimistic attitude towards life by building interpersonal experiences will get better results for themselves and those around them. So, it can be said that emotionally intelligent individuals definitely benefit in terms of solving problems in their lives.

Empathy is the root of caring and compassion in every emotional relationship of a person in an attempt to adjust his emotions to the emotions of others. The key to understanding other people's feelings is being able to read non-verbal messages such as tone of voice, gestures, facial expressions, and so on (Gaffar, et al., 2019).

Based on these opinions, it shows that empathy is closely related to one's moral behavior. Children who have the ability to empathize can be classified as "good" children, who are gentle, who think about the feelings of others, who direct themselves to others. it is clear to be wise, polite, generous in their willingness to see the world as others see it, to experience the world through the eyes of others, and to act upon that knowledge with gentleness of heart. When he behaves, talking to others always takes into account the feelings or emotions of the person he is dealing with by paying attention to his tone of voice, his movements, and his facial expressions.

The inability to develop empathy and interpersonal communication well will result in a poor quality of life. One way to increase empathy is through the figure of a mother. Mothers who are satisfied with their role will be able to create children who have high empathic concerns (Ioannidou & Konstantikaki, 2008)(Permana et al., 2019).

The most frequently discussed school life problems related to students, teachers, parents, and instructional supervisors are about students who are not able to fulfill the learning instructions that have been designed by the teacher or those who often make their classmates feel disturbed while carrying out the learning process. Not surprisingly, more than any other teaching variable, the classroom observation instrument used in almost every public school to assess teacher performance emphasizes how teachers manage their students. Some teachers may blame students' indifference, lack of effort, disruptive behavior, and general lack of cooperation on the shortcomings of their own students or on the lack of support provided by the community, family, and school administrators. However, many other teachers have managed this impossible situation and made their students willing to cooperate in dealing with poor student behavior and unfavorable school conditions. These teachers set up safe and productive classroom communities where students work together and enjoy learning.

Some teachers can manage the learning process in the classroom smoothly where students obey the learning instructions cooperatively with relatively few distractions. Meanwhile, other teachers try hard to deal with students' mistakes as they try to gain control of their own class. Teachers who are still in the teaching profession and experienced the last situation finally gave up, and decided that today the students do not have enough motivation to learn and are difficult to control, so the teaching strategies applied will be useless and have no impact on students, and the only the only thing that can be done at that time is try to survive until school hours are over.

Classroom management strategies and how to apply them underlie the teacher's experience of whether they experience satisfactory teaching or burnout trying to deal with student misbehavior and to force them to work together effectively. By having the ability to choose and implement such strategies, teachers are expected to have the ability to fulfill one of their primary teaching responsibilities, namely, to provide students with a learning environment that is conducive to achieving a meaningful learning experience and free from distractions, distractions, and security disturbances. and their serenity.

## Method

This study uses a grounded theory design with a qualitative approach that is applied to produce a theory that can explain, at a broad conceptual level, processes, actions, or interactions about substantive topics. In this study, the researchers attempted to come up with a theory that stems from using Alpha brainwaves to develop a teacher's empathetic awareness. It describes the NLP training process of activities, interactions, and events that occur over time. Through the application of a constructivist approach, the researchers will focus on the meanings ascribed to the respondents consisting of their views, values, beliefs, feelings, assumptions, and ideologies related to their profession as dedicated teachers and their primary instructional responsibilities in teaching. manage classes.

To collect sufficient information and data to draw conclusions, the researcher used several variations of data collection techniques. Data collection techniques used in this study were documentation studies, participatory observation techniques; autoanamnesis interview technique; and a written assessment using a test tool in the form of the Profile of Nonverbal Sensitivity Test (PONS Test). Each instrument provides specific information and data according to the research objectives and the characteristics of the research questions. A written instrument in the form of the PONS Test was used to collect data on the level of empathy awareness of each respondent. Participatory observation and autoanamnastic interviews were used to obtain specific information about the views, values, beliefs, feelings, assumptions, and ideologies of each respondent.

The type of population used for purposive sample research is taking samples or subjects based on certain characteristics or traits that are considered to have something to do with known traits. In addition, the sample used in this study uses a probability sample design, which means that sampling is based on the idea that the entire population unit has the same opportunity to be sampled.

Respondents in this study were junior high school teachers in the administrative area of West Java Province, Indonesia. The selection of respondents was based on purposive sampling which must be in accordance with the research objectives and the required characteristics of key informants. Respondents were school delegates from each city and district in West Java province. They were invited to take part in NLP-based training which was held over a period of time according to the need for research data collection. Characteristics of respondents are determined based on gender, age, and years of service.

## Result And Discussion

**Table 1. Demographic Profile of Respondents**

No	Variable	Frequency (f)	Percentage (%)
1	Gender		
	Male	53	53
	Female	47	47
2	Age		
	Under 35 years old	28	28
	Between 35 – 45 years	53	53
	Over 45 years old	19	19

No	Variable	Frequency (f)	Percentage (%)
3	Teaching Service Period		
	Under 10 years	16	16
	Between 10 – 20 years	45	45
	Over 20 years	39	39

Based on table 1 above, it can be seen that there are 53 teachers (53%). This will certainly affect the results of the empathy awareness test, where men tend to prioritize logic and rationality over their feelings. Furthermore, based on the age range, it can be seen that there are more teachers aged between 35-45 years than teachers aged under 35 years and over 45 years. This implies that teachers who are involved in empathy awareness testing and Alpha brainwave optimization training are in an ideal condition and have the openness to accept constructive new things. When viewed from the period of service, it can be seen from the table above that more teachers have served and educated more than 10 years. Thus, it can be interpreted that the teacher's knowledge of variations in the characteristics of students and their experience in dealing with various characteristics of students is considered good.

**Table 2. Calculation of Pre- and Post-Training Empathy Awareness Variables Based on Gender**

Gender	Pre Training		Post Training		Coefficient of Determination
	Max	Min	Max	Min	
Male	52,74	46,53	53,47	43,17	0,621
Female	51,62	47,26	55,83	48,38	0,521

Based on table 2 above, it is known that male teachers experienced a more significant increase in empathy awareness than female teachers after attending Alpha brainwave optimization training. This does not mean that male teachers are better at having empathy awareness than female teachers. Referring to the table above, although the coefficient of female empathy awareness is only 5.21, the value of their post-training variable is higher than that of male teachers of 56.83.

**Table 3. Calculation of Pre- and Post-Training Empathy Awareness Variables Based on Age**

Age	Pre Training		Post Training		Coefficient of Determination
	Max	Min	Max	Min	
Under 35 years old	43,26	56,74	51,35	48,65	0,809
Between 35 – 45 years	46,72	53,28	55,47	44,53	0,875
Over 45 years old	44,83	55,17	53,66	46,34	0,883

Based on table 3 above, it is known that teachers aged between 35-45 years obtained a higher value for the empathy awareness variable than teachers aged under 35 years and over 45 years, namely 55.47. However, teachers aged over 45 years had the highest coefficient of empathy awareness compared to teachers aged under 45 years, which was 8.83. Meanwhile, teachers who are under 35 years old have the lowest value of empathy awareness variable even though they have attended Alpha brainwave optimization training, which is only 51.35.

**Table 4. Calculation of Pre- and Post-Training Empathy Awareness Variables Based on Working Period**

Teaching Service Period	Pre Training		Post Training		Coefficient of Determination
	Max	Min	Max	Min	
Under 10 years	45,37	54,63	52,28	47,72	0,691
Between 10 – 20 years	47,83	52,17	55,61	44,39	0,778
Over 20 years	46,61	53,39	53,72	46,28	0,711

Based on table 4 above, it is known that teachers who have worked between 10-20 years have the highest value for the empathy awareness variable compared to those who work under 10 years and above 20 years, which is 55.61. The teacher also has the most significant coefficient of empathy awareness after attending the Alpha brainwave optimization training compared to those who work under 10 years and over 20 years, which is 7.78.

In an attempt to come up with a theory about using Alpha brainwaves to increase teachers' awareness of empathy in classroom management, the researchers first devised a proposition. This proposition consists of systematic steps that need to be taken so that the teacher can access the subconscious through Alpha brain waves. This needs to be done in an effort to overcome various problems faced by teachers so that it has an impact on increasing teacher resilience. The theoretical formulation refers to the four pillars of Neuro-Linguistic Programming, namely Outcome, Sensory Acuity, Behavioral Flexibility, and Building Rapport. Thus, the use of Alpha brain waves will be adapted to the NLP mechanism in exploring the subconscious and optimizing the teacher's potential. The results of subconscious exploration are intended to explore information that is specifically related to teachers' beliefs in making various realistic plans that can be used to solve the problems they face (Gaffar, et al., 2017).

- **Planning Phase** - This NLP-based training for teachers is specifically designed to develop an empathetic awareness of teachers which will be applied when they manage learning activities in the classroom. The technique of delivering the material in this training has been adapted to the strategy of using Alpha brain waves in its delivery. So that the trainees, both consciously and unconsciously, will be conditioned to receive the material in brain wave conditions at the alpha level. In addition to material delivery techniques, spatial planning is also another factor to be prepared. The layout of tables, chairs, projectors and audio devices is specially arranged to provide a sense of calm, where comfortable conditions will also affect the decrease in brain waves from beta levels to alpha levels effectively. The allocation of time used to deliver materials is another factor considered during the planning process of training activities.
- **Implementation Phase** - At this stage, the researcher made direct observations of the interaction process between participants and trainers. The researcher observed the movements, expressions and diction used by the participants during the training. This was done as an effort to extract information related to the physical condition of the participants whether they could be categorized as comfortable and understand the training material or not.
- **Evaluation Phase** - After the implementation phase is complete, the researcher then explores information related to the participants' experiences during the training. This was done to interpret the meaning of the participants' views, values, beliefs, feelings, assumptions, and ideologies related to their profession as dedicated teachers and their primary instructional responsibility in managing the classroom.

There is a need for a paradigm shift in examining student learning processes and interactions between students and teachers. Teaching and learning activities should also consider students more. Students are not empty bottles that can be filled with whatever information the teacher deems necessary. In addition, the flow of the learning process does not have to come from the teacher to the students. Students can teach each other with other students. In fact, many studies show that peer teaching is more effective than teacher teaching. The teaching system that provides opportunities for students to work together with fellow students in structured tasks is referred to as the "mutual cooperation learning" system. In this system, the teacher acts as a facilitator. In addition, each group member is not only responsible for their own learning but also helps other teammates in learning, so as to create an atmosphere of success (Lie, 2003).

In today's jungle of modernity, empathy is an expensive item that is quite hard to come by. Empathy is not just about feeling, but also acting with real actions. In practical terms this is quite difficult to do, because modern humans are confined by their ego, and giving empathy is very soothing to the soul.

Empathy is the ability to sense feelings from another person's perspective. Empathy emphasizes the importance of sensing the feelings of others as the basis for building healthy interpersonal relationships. In empathy, attention is shifted to recognizing other people's emotions, the more a person knows his own emotions, the more skilled he is at reading other people's emotions (Gaffar, et al., 2019). So that the higher the level of adolescent empathy for others, the more easily the teenager will interact with others and receive the information provided. In addition, empathy is also a factor that affects the quality of life of students. The lower the level of student empathy, the lower the level of their quality of life. Aspects of the ability to empathize which includes cognitive and emotional aspects. Carlledge & Milburn (1995) mention these aspects of the ability to empathize, namely:

- a) Recognition and discrimination of feelings, namely the ability to use relevant information to name and identify emotions.
- b) Perspective and role taking, namely the ability to understand that other individuals can see and interpret situations in different ways, as well as the ability to take and experience other people's points of view. Cognitive and affective role taking ability is the ability to think about what other people think and infer other people's feelings.
- c) Emotional responsiveness, namely the ability to experience and be aware of one's own emotions.

Adult teachers will show independence in acting and have a high work ethic. Meanwhile, wise teachers will be able to see the benefits of learning for students, schools, and communities, showing an open attitude in thinking and acting. The essence of the teacher's personality competence all boils down to the teacher's personal internal. The pedagogic, professional and social competencies of a teacher in carrying out lessons will ultimately be determined by the personality competencies they have. The teacher's personal appearance will further influence the interest and enthusiasm of children in participating in learning activities. Personal teachers who are polite, respectful of students, honest, sincere and exemplary, have a significant influence on success in learning, regardless of the type of subject matter.

Therefore, in some cases, it is not uncommon for a teacher who has the ability to fulfill pedagogical and professional requirements in the subjects he teaches, but its application in learning is less than optimal. This is very likely to happen because of the inability to build a bridge of heart between the teacher himself as an educator and students, both in the classroom and outside the classroom. Many government efforts to improve the pedagogical and professional skills of teachers are carried out, both through training, workshops, and empowerment of subject teachers. However, it does not touch the improvement of the teacher's personality competence.

Students are often faced with conflicting values, on the one hand students are taught to behave in a good way, honest, respectful, frugal, diligent, disciplined, polite and so on, but at the same time they are shown (by parents, even by the teachers themselves), things that are contrary to what they are learning, for example punishments or sanctions for school rules only apply to students while teachers are immune to sanctions, students are prohibited from violence but many teachers engage in violence against students, teachers smoke forbid their students to smoke, and there are many events that damage the image of the teaching profession. The opposite is what causes students to find it difficult to find good role models in their environment, including schools.

Teachers are not only teachers, coaches and mentors, but also as mirrors where students can reflect in the mirror. In interpersonal relations between teachers and students, a student situation is created that allows students to learn to apply values that are examples and provide examples. Teachers are able to become people who understand students with all their problems, teachers must also have authority so that students are reluctant to them. Based on the description above, the function of the teacher's personality competence is to provide guidance and role models, jointly develop creativity and generate learning motives and encouragement to progress to students.

Indonesian culture is closely related to social values that are full of norms. Ethics and personality are important things for someone to be accepted in social life. Increasing a sense of empathy to develop one's social competence with Alpha waves awakens teachers to touch the hearts of students in different ways, with a strong belief in communicating using a soft but strong tone of voice, a desire to feel and understand, think with a broad perspective and different, then a teacher can be accepted by anyone. Not only for schools, by improving social skills, a teacher can be wider to be able to touch various layers of society. People generally look at the behavior of a teacher to ensure that it is not only a name but someone who is able to be a good example for anyone who sees it.

By speaking good words, teachers can be more easily accepted by their students.

In this millennial era, generally the trend of students is to see something by judging how many examples are there, but they are not trained to analyze and then judge with their own beliefs what is good and bad. Empathy is important to be grown and instilled in children from an early age as an effort to form a child's personality that is good, moral/ethical, virtuous, civilized and cultured. Early childhood is more easily formed if the supporting factors such as family background and education. There is one side to the process of empathy, namely being able to put yourself in that person's shoes and share directly their sadness because generally someone who has empathy has experienced and has felt it.

## Conclusion

Empathy is the root of caring and compassion in every emotional relationship of a person in an attempt to adjust his emotions to the emotions of others. The key to understanding other people's feelings is being able to read non-verbal messages such as tone of voice, gestures, facial expressions, and so on. Awareness of teacher empathy can be developed through the use of Alpha brainwaves in special training programs designed for such needs. The stages developed to apply alpha brain waves in developing teacher empathy awareness are, 1) Build and Maintain Rapport; 2) Calibration; 3) Map the Brain; 4) Assertiveness Installation; 5) Drop the Anchor; and 6) Provide Feedback. The use of Alpha brainwaves adapted to the NLP mechanism is intended to explore the subconscious and optimize the potential of the teacher. Increasing a sense of empathy to develop one's social competence with Alpha waves awakens teachers to touch the hearts of students in different ways, with a strong belief in communicating using a soft but strong tone of voice, a desire to feel and understand, think with a broad perspective and different, then a teacher can be accepted by anyone.

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