

The Improvement of Teachers' Pedagogical Competence in Recognising Students Characteristics with Neuro-Linguistic Programming (NLP) In Indonesia

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This study aims to improve teacher's pedagogical competence in recognising student characteristics in Indonesia through Neuro-Linguistic Programming (NLP) training. The characteristics of the students refer to the Regulation of the Minister of National Education of Indonesia Number 35 Year 2010 concerning Technical Guidelines for the Implementation of the Teacher's Functional Position and Credit Score which includes six matters. The NLP subjects that are trained are preferences, metaprograms, equation exploration, framing, and neurological level. The method that used is research and development according to Borg and Gall. Initial research was conducted to determine teacher's pedagogical competence to recognise student characteristics. The population of the study was the teachers of Junior High Schools (SMP) and Public and Private Madrasah Tsanawiyah (MTs) in Surabaya City. NLP training products were developed and conducted in small-scale and large-scale trials. The final results show that NLP training has been able to help improve pedagogical competence in recognising the student characteristics for the teachers of state and private MTs in Surabaya, Indonesia.

Keywords: *Teacher, Pedagogical competence, NLP, Student characteristics.*

Introduction

The low of teachers' pedagogical competence was being a warm study in almost all countries in the world. The issue of teacher quality with mastery of pedagogical competencies has become a top priority in the United Arab Emirates (UAE) (Ismail & Jarrah, 2019). The results of teacher competency tests in the state of Kaduna led to reform agitation for the education sector in Nigeria (Aina & Ayodele, 2018). In Zimbabwe, Africa, although all resources have been devoted to overcoming educational challenges, especially teacher pedagogical competencies, the literature review shows teacher pedagogical competencies still need to be improved (Moyo & Hadebe, 2018). Across Europe, more and more attention is being given by governments to research in various sectors for academics, including in responding to teacher challenges (Lewthwaite & Nind, 2017). In Malaysia, the ability of educators in the development and implementation of HOTS has been endeavoured to improve the quality of student learning outcomes (Sulaiman, Ibrahim, Rahim, Hakim, & Omar, 2019). Pedagogical competence plays a very important role in improving the quality of teaching and learning. Teacher's pedagogical competence has an effect on student perceptions (Kaynaradağ, 2017). Qualified teachers have an effect on student learning outcomes (Adnot, Dee, & Wyckoff, 2017). Because students have different abilities, needs and learning styles, so the teacher must adjust the curriculum and teaching activities by considering the differences in these students (Alzain, Clark, Ireson, & Jwaid, 2018).

These characteristics of students need to be understood by the teacher so that the values and subject delivered by the teacher in the learning process can be well received by students. The examples are the need for outdoor education for physical learning (Samsudin, Kamalden, Aziz, & Ujang, 2019). In addition, if each student has a learning goal that is in accordance with the teacher's vision, it will create a good learning process and lead to the achievement of learning objectives. This happens because the root of the group vision is the personal visions of the group members (Senge, 1996). Student characteristics can include learning styles, psychological dimensions, and metaprograms. Student learning styles consist of visual, auditory, and kinesthetic (Ibrahim & Hussein, 2016). The psychological dimension consists of three different dimensions that are internal or external (inside or outside someone), stable or unstable (fixed or unfixed), and controlled or uncontrolled (Roese, Smallman, & Epstude, 2017). Metaprograms are built-in programs that influence each individual's actions, including proactive or reactive (Frey, Strong, & Onyewuenyi, 2016).

The efforts to improve the teacher's pedagogical competence in recognising the student characteristics have been carried out in various countries including in Leed, England, to provide equal learning opportunities for low-ability students, teachers using the linguistic ethnographic method (Sneel & Lefstein, 2018). In Taiwan, to accommodate a variety of student learning styles, teachers use multimedia-based teaching styles (Weng, Ho, Yang, &

Weng, 2019). In Libya, by understanding the different abilities and learning styles of students, the LAES (Libyan Adaptive Education System) system was used (Alzain, Clark, Ireson, & Jwaid, 2018). In Myanmar, in the context of education reform, the government implemented child-centred approaches (CCA) training for teachers. However, from the evaluation results, this project has a limited impact on the quality of teaching and learning (Borg, Clifford, & Htut, 2018).

In Indonesia, many efforts have been made both by the Ministry of Education through the Education and Training Centre of Education and Culture Ministry and the Education Quality Assurance Agency and by the Ministry of Religion through the Religious Training Centre. State and private universities, non-governmental organisations, and private training institutions have also jointly tried to improve teacher pedagogical competencies, including in Sumatra. Improving the teacher's pedagogical competence is done by improving the role of school principals (Boon, 2017). In Makassar, improving teacher's pedagogical competence is done by developing learning instruments (Ramlawati, Mun'im, & Yunus, 2018). In Bandung, efforts to facilitate students with a visual learning style are made by providing colourful textbooks and examples in life (Priscylio, Rochintaniawati, & Anwar), and many more.

However, from the latest data in Indonesia, the Teacher Competency Test results for the national average pedagogical competence are only 48.94 from the Minimum Competency Standard by 55 (Maulipaksi, 2016). It is reinforced by the results of field studies using interviews and questionnaires for the teachers of Middle School, State and Private Madrasah Tsanawiyah in Surabaya City Indonesia related to teacher's pedagogical competence in recognising student characteristics with six indicators. The results show that for the first indicator, in general, the teachers do not realise that each student has a different learning style that must be understood by the teacher by preparing learning methods that support all learning styles. For the second indicator, the average teacher has implemented it well. For the third indicator, some teachers do not have the initiative to change student-sitting formation. Hence, students are free to sit anywhere even though there is no equal opportunity, especially for students who have different physical disabilities or learning abilities. As for the fourth indicator, some teachers choose to directly recommend students to face the teacher of Guidance Counselling because the teacher does not have sufficient ability to overcome the deviant attitudes of students. To overcome the fifth indicator, in general, this has been overcome by the existence of school extracurricular program and all students must choose an extracurricular in accordance with their respective interests. As for students with poor learning abilities, some teachers instruct these students to take extra lessons under the guidance of teachers outside of school hours. As for the sixth indicator, there are still many teachers who do not pay attention to students with certain physical disorders, so the bullying occurred at school.

In some countries in the world, the improvement of one's competence can be made through NLP (Neuro-Linguistic Programming). NLP is considered as the most effective form of soft skills development training (Naim, 2017). Practitioners have successfully applied NLP in various other fields such as law, HRM, training, teaching, sales and management (Dilts, R. and Judith DeLozier *et al.*, in (Naim, 2017)). In Africa, NLP is used to improve pedagogical competence for lecturers in the public accounting department so that students can absorb courses that are considered difficult to become easy (Rooyen & Ebrahim, 2018). In Malaysia, NLP is used as a therapeutic education program to treat two athletes who are discouraged by physical injury and return to have the enthusiasm and are ready to take part in the next match (Savardelavar & Kuan, 2017). In Iran, NLP is trained on EFL teachers, and the results show significant improvement in the ability to teach EFL teachers in Iran (Marashi & Abedi, 2017). In Turkey, teachers are given NLP training to support teacher competence in teaching (Turan, Kodaz, & Turan, 2016). NLP has also been applied in the learning process and has been proven to make students understand each other and achieve better learning outcomes (Seitova *et al.*, 2016). The effectiveness of NLP also appears in improving the quality of a leader's performance (Ahmed, 2017).

Based on the background above, the researchers conducted research and development to improve the pedagogical competence of teachers in recognising the characteristics of students through NLP training that aimed at the teachers of State and Private MTs in Surabaya, Indonesia. MTs is an Islamic-based school in Indonesia and has special characteristics that are different from public schools. The management is also carried out specifically under the auspices of the Ministry of Religion Indonesia. This study will begin with preliminary research to determine the level of pedagogical competence of teachers generally both in SMPs and public and private MTs in Surabaya city and the teacher's need for NLP training. Furthermore, the NLP training model will be developed and adjusted to the needs of the teachers from the initial research results. The model that has been developed will be tested on teachers of state and private MTs in Surabaya, Indonesia.

Method

Research Design

The research method that used is research and development (R&D) which refers to Borg and Gall's model with ten steps of research and information collecting, planning, developing a preliminary form of product, preliminary field testing, main product revision, main field testing, operational product revision, operational field testing, final product revision, dissemination and implementation (Borg & Gall, 1983). In this case, the researchers grouped the 10 steps into 3 steps to facilitate the research and development process, that are: (1) Preliminary Research, (2) Product Development, and (3) Product Trial.

Sources of Research Data

The subjects of this study were Junior High School and Madrasah Tsanawiyah teachers in Surabaya City Indonesia that were randomly selected from MTs and Junior High School teachers in South Surabaya, North Surabaya, East Surabaya, West Surabaya and Central Surabaya, which were 27 teachers.

Data Collection

Data were collected using questionnaires and interviews. Data analysis refers to Huberman and Saldana's opinion. Test of data validity is carried out through data credibility test (questionnaire and interview), transferability test (making research reports clearly, detail, and systematic), dependability test (audit of the overall process of expert's research), and conformability test (audit of research results of experts).

Research Procedure

Product development is carried out through several stages that are the preparation of initial products which is consisting of three products, namely training models, instruments and training guidelines, and then the product is validated by pedagogic experts, training experts and NLP experts using the Delphi technique. Product revision is done until each expert gives a minimum value of 75% or good.

Product trial is the final step after the product development process has been completed. Product trial was conducted twice, that are small-scale trials to obtain normality test data, reliability test, instrument validity test and the effect between before and after training and the evaluation results of the training implementation seen from the level of satisfaction of the trainees. If needed, revisions will be implemented to improve the products that have been developed. The second is large-scale trials of products by involving more teachers as the trainees. If needed, revisions will be implemented to improve products that have been developed and are ready to be implemented to the community.

Analysis of Research Data

The data analysis technique of the initial research results is in the form of qualitative data. Qualitative data is in the form of descriptive sentences obtained from interviews and documentation, which is separated by categories to get conclusions. The stages of qualitative data analysis include data collection, data display, data condensation, and conclusions. Test of data validity includes credibility test, transferability test, dependability test, and conformability test. Data analysis techniques for product development are through validity

testing by three experts and empirical tests related to the product produced. The instruments are made through the reliability test, normality test and instrument validity test. The third step is product trials conducted twice that are small-scale trials and large-scale trials. The results of revision of the large-scale trial are ready to be disseminated.

The data analysis technique in expert validation was carried out in quantitative descriptive and descriptive qualitative ways. The small-scale test and large-scale test were analysed quantitatively by using one sample t-test formula. The paired t-test was used when the data were normally distributed and homogeneous. When the data were not normally distributed and homogeneous, then the analysis was done by using the Wilcoxon *match pair* test. In conducting such data analyses, SPSS version 23 was used.

Discussion

Preliminary Research

Data collection techniques that used in this qualitative study were interviews and questionnaires, which is in the form of closed and open questionnaires. Interviews were conducted firstly with the semi-structured instrument to determine the level of teachers' pedagogical competence, after that the researcher briefly explained NLP and ended with the teacher's opinion related to the implementation of NLP training to improve teacher's pedagogical competence. The outlines of these questions include: (1) What do teachers know about pedagogical competence?, (2) What problems arise in the field related to the implementation of pedagogical competencies, (3) Have the teachers heard or known about NLP?, (4) What is the teacher's opinion if NLP training is held to improve teacher's pedagogical competence?. At the end of the interview session, the researcher submitted a closed questionnaire and an open questionnaire to be filled out. The closed questionnaire consisting of 11 statement items were made to recognise the level of need for NLP training and the basic abilities of teacher pedagogical competencies.

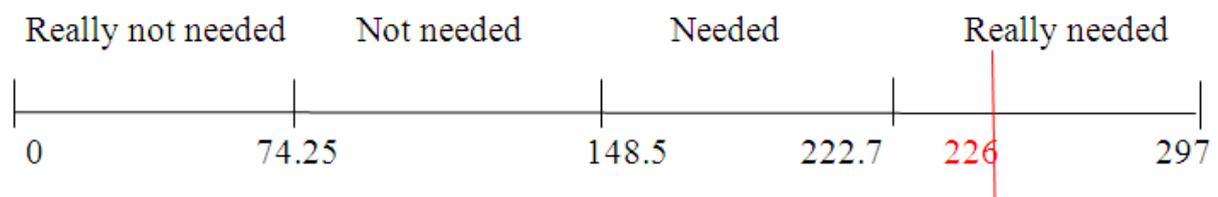
Interviews and distribution of this questionnaire were conducted to 27 teachers of State and Private Junior High Schools and State and Private Madrasah Tsanawiyah in Surabaya City. The maximum score for the need level of teacher pedagogical competency training is 162 while the score of questionnaire results is 113. The scale of the category that used to analyse the need level of pedagogical competency training is 0-40.5 = really not needed, 41-81 = not needed, 82-121.5 = needed, and 122-162 = really needed. So it can be concluded that the need for teacher pedagogical competency training is "needed".

Furthermore, the maximum score on the aspect of NLP training needs is 135. The scale of the category used to analyse the need level of NLP training is 0-33.75 = really not needed, 34-67.5 = not needed, 68-101.25 = needed, and 102-135 = really needed. Based on the scale of

these categories, it can be concluded that the need level of NLP training for teachers is “really needed”.

Based on the closed questionnaire data tabulation of the need level of NLP training to improve the teacher’s pedagogical competence through NLP above, then a category score was made. If the respondent consists of 27 peoples while the numbers of questions are 11, then the highest score is $27 \times 11 = 297$ and the lowest score is $27 \times 0 = 0$. From the highest and lowest scores are then divided into four category scales with the highest score information is really needed, second is needed, third is not needed, and fourth really not needed. An explanation of this information can be seen in Figure 1.2 below.

Figure 1.2 Category score of product development needs analysis results



The results of the questionnaire showed that the maximum score was 297, while the questionnaire result score was 226, if it was presented then it was obtained $(226:297) \times 100\% = 76.10\%$ of the expected 100%. The category scale that used to analyse the level of NLP training needs to improve teacher’s pedagogical competencies is $0-74.25 =$ really not needed, $75-148.5 =$ not needed, $149-222.7 =$ needed, and $223-297 =$ really needed. So it can be concluded that the need for NLP training to improve teacher’s pedagogical competence is 76.10% or “really needed”.

The conclusions from the results of the initial research both from the questionnaire as explained above and interviews with 27 teachers of SMP and MTs in Surabaya City show that

1. The teachers know but do not understand the content of pedagogical competencies that must be fulfilled.
2. The teachers attend training on pedagogical competence, but it was rich in theory and less in practice.
3. The problems that arise in the classroom are far more than the teacher’s ability to manage the class.
4. Different characteristics of students require teachers to be able to understand aspects of student psychology although they are not from psychologist’s background. On the other hand, teachers are also required to be able to teach according to the demands of the fluctuating curriculum.
5. The teacher has great enthusiasm during training, but after returning to the school, his enthusiasm returns as before training.

6. Schools in Surabaya are generally still lack of counselling teachers to deal with student problems.
7. The need level of NLP training for teachers is “really needed”.
8. The need level of NLP training for teachers is “really needed”.
9. The need level of NLP training to improve teacher’s pedagogical competence is “really needed”.
10. The training model needs to be enriched with practice so that trainees can more easily apply it to their respective schools.
11. The participants of training or this population of research and development are changed from junior high school teachers in Surabaya to MTs teachers in the Ministry of Religion of Surabaya because they were considered more needed to self-development.

From the results of the preliminary research, the researchers planned to create a product in the form of a training model to improve teacher’s pedagogical competence through NLP. The sample is teachers of state and private MTs in Surabaya in collaboration with the Madrasah Education Division of Ministry of Religion Surabaya and the Work Group of Madrasah Principal Surabaya City.

Product Development

There are three types of products developed that are training models, training instruments, and training implementation guidelines. This training model was created with the aim of being a reference for institutions that will carry out the training process to improve teacher’s pedagogical competence through NLP so that all processes are carried out according to procedures in order to achieve the expected goals. Besides that, it is also providing information to candidates of the training committee in order to monitor the implementation of the training from start to finish whether it is according to the procedure or not.

The elements in this training model for teacher pedagogic competency improvement through NLP consist of five parts that are: (1) the syntax, (2) the social system, (3) the support system, (4) the reaction principles, and (5) the instructional effect and nurturing effect. Each section consists of several indicators and is explained descriptively and equipped with figures and tables.

The two training instruments are intended as a reference for institutions that will carry out the training process to improve the pedagogical competence of teachers through NLP so that they are not disturbed with making training instrument because everything was conceptualised. In addition to facilitating the task of the candidates of training committee in preparing the training instruments, it also provides a clear description for the candidate of training committee regarding the instruments that needed in the implementation of the training. This training instrument consists of three parts that are: (1) Pre-Training Instruments, (2) Training

Implementation Instruments, and (3) Post-Training Instruments. Each section consists of several instruments that are presented in the form of concrete examples, so the committee only needs to change a little on the identity section. Especially for the second part in the form of training implementation instrument, there are training materials presented in the form of PPT and descriptions, and they are enriched with pictures and colours to make it look more alive. The NLP subjects that are taught to improve the pedagogical competence of teachers in recognising the characteristics of students are preference, metaprogram, exploration equation, framing, and neurological level. The subjects and sessions of training are divided into 32 lesson hours x 60 minutes, where each day is scheduled for only 8 lesson hours to avoid the boredom of the trainees so that the subjects can be absorbed maximally. Therefore, the total time needed in conducting the training is four days.

The third product is a guideline for implementing training for organisers of training to improve teacher's pedagogical competence through NLP. This guideline explains in detail what preparations the committee needs to make before, during and after the training. It contains descriptive explanations that are equipped with figures and tables.

After the three products have been made, then the products are validated by three experts that are NLP experts, pedagogical experts, and training experts. The delivery of products to these three experts is using Delphi technique in which the researcher submits three files, that are the product, standards of product evaluation and closed or open questionnaire to the first expert to be evaluated in relation to product quality. After being evaluated by the first expert, revisions are made, and the revised results are returned back to the first expert for re-evaluation. If there is a revision the researcher makes and it is returned back to the first expert, and so on until the first expert says there is no revision, then the researcher deliver to the second expert who is pedagogical experts. The steps taken by the researchers to the second and third experts are the same as what the researchers did for the first expert. The validation results of three experts can be seen in Table 1.1.

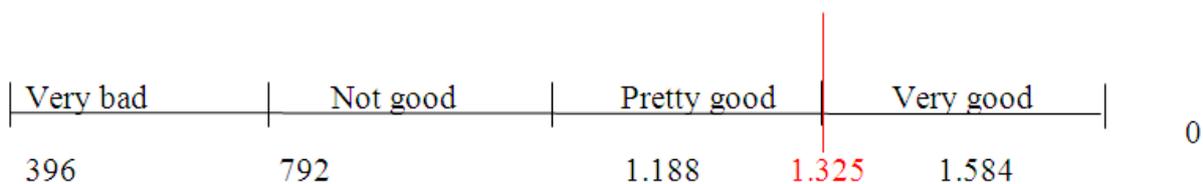
Table 1.1: The validation results of three experts on the three products

No	Aspect	Score			Total	%
		Expert 1	Expert 2	Expert 3		
1.	Book 1 (Training Model of the Improvement of Teachers' Pedagogical Competency through NLP at MTs in Surabaya City)	155	173	169	497	79.65%
2.	Book 2 (Training Instrument of the Improvement of Teachers' Pedagogical Competency through NLP at MTs in	143	178	175	496	86.12%

	Surabaya City)					
3.	Book 3 (Training Guidelines for Teacher Pedagogical Competency Improvement through NLP at MTs in Surabaya City)	108	102	122	332	86.46%
Total					1325	83.65%

If added up, then the highest score of the three results of expert validation on the three products that have been developed by researchers is 1325, while the maximum value is 1584 and the lowest score is 0. Therefore, based on these data, the level of assessment of the three experts on the three products is $(1325:1584) \times 100\% = 83.65\%$ of the expected 100%. The continuum can be described as in Figure 1.2 below.

Figure 1.2. Continuum of the three results of expert validation related to products



The continuum picture above shows that the assessment of the three experts on the product that has been developed was very good and ready for product trials. Before a product trial was carried out, two additional instruments needed to be made that were the pre- and post-training instruments and the questionnaire of training implementation. Pre- and post-training instruments are to measure the extent of the effect of NLP training in improving teacher's pedagogical competence. The pre- and post-training instruments were made the same consisting of 45 statements which referred to 45 indicators of pedagogical competencies according to the Ministry of National Education, General Directorate of Quality Improvement of Educators of Republic Indonesia (Kependidikan, 2010). The making of pre- and post-training instruments used a Likert scale with gradations from really agree to really disagree (Sugiyono, 2015). The second additional instrument was an instrument of training implementation evaluation, which was made using semantic differential with 23 statements with answers arranged in a continuum line whose very positive answers were located on the right side of the line while the negative answers were located on the left side of the line. These 23 statements were divided into four sections that were resources, training methods and media, training subjects, and finally training as a whole (Sugiyono, 2015).

***Product Trial
Small Scale and Revision***

A small-scale trial was conducted on 31 State MTs teachers in Surabaya City in collaboration with the Work Group of State Madrasah Principal Surabaya City Indonesia. During this small-scale trial, the validity, normality and reliability test of pre and post-training instruments were also conducted

Table 1.2 Results of Normality Test of Pre- and Post-Training Instrument

One-Sample Kolmogorov-Smirnov Test			
		Pre-Test	Post-Test
N		31	31
Normal Parameters	Mean	151.58	155.97
	Std. Deviation	14.285	14.983
Most Extreme Differences	Absolute	.090	.098
	Positive	.078	.081
	Negative	-.090	-.098
Test Statistic		.090	.098
Asymp. Sig. (2-tailed)		.200	.200

Kolmogorov-Smirnov statistical value obtained had a pre-test statistic value of 0.090 and post-test of 0.098, while the Asymp value. Sig. (2-tailed) obtained was 0.200. The value was more than 0.05, then the value was in accordance with the criteria that the distribution of data is called normal distribution if it has significant level > 0.05 .

Table 1.3: Results of Reliability Test of Pre- and Post-Training Instrument

Reliability Statistics	
Cronbach's Alpha	N of Item
.962	45

From the results of the post-test reliability test results above, the Cronbach's alpha value obtained was 0.962, which is greater than 0.6, meaning that the respondent's answers were reliable. While based on the results of the validity test, the significance level obtained was less than 0.05, which means that all question items used in the pre- and post-test met the elements of validity.

Table 1.4: Results of T-Test (Paired Sample T-Test)

Pair 1	Pre-Test & Post-Test	N	Correlation	Sig.
		31	.120	.519

From the results of the pre- and post-training instruments in small-scale trials, the correlation value between the two variables was 0.120, meaning that the relationship was small and positive. The significance level of the relationship was 0.519, meaning that it was not significant at the 0.01 level.

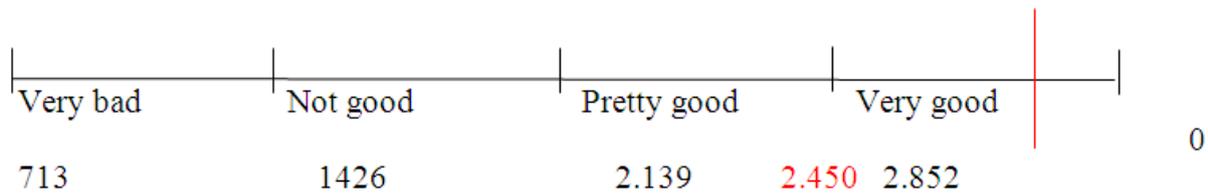
Table 1.5: Paired Samples Test

Paired Differences								
				95% Confidence interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	T	df	Sig. (2-tailed)
Part 1 Pre-Test-Post-Test	-4.742	2.543	.457	-5.675	-3.809	-10.384	30	0.000

The probability value/p-value of T Paired test was 0.000, meaning that there were differences between before and after treatment. Because p-value was less than 0.05 (95% confidence) and mean was -4.742, which was a negative value. This means there was an improving tendency after treatment of 4.742.

While the evaluation results of the small-scale trial training were 85.90% or very good, these results were obtained from the number of questions on the results of training evaluation questionnaire that consisted of 23 aspects with four assessment columns from 31 trainees, the highest score was $(23 \times 31) \times 4$ (highest score) = 2852, and the lowest score was 0. The total score obtained was 2450. So, based on these data, the level of evaluation of training evaluation results on the implementation of training was: $(2450:2852) \times 100\% = 85.90\%$ of the expected 100%. Therefore, the continuum can be described as Figure 1.4. Based on the results of the continuum, the value of 2450 lay in the very good category.

Figure 1.3. Continuum results of the closed questionnaire of training evaluation in small-scale trial



From the evaluation results on the implementation of small-scale trials, the pre- and post-training instruments showed good results in terms of normality, validity, and reliability tests of the instrument. The results of training implementation evaluation also showed very good results, meaning that the training participants were satisfied with the implementation of the training. Pre- and post-training results show that there were significant results between before and after training. Revisions were made to further enhance the impact of training on participants in terms of training methods becoming livelier with the addition of ice-breaking sessions and practices with the aim of training participants to better understand the subjects in question.

Large Scale Trials and Revision

Large-scale trials were conducted on 81 state and private MTs teachers who were randomly selected by the Madrasah Education Division of the Ministry of Religion, Surabaya City of Indonesia.

Table 1.6: Results of T-Test (Paired Sample T-Test)

Pair 1	Pre-Test & Post-Test	N	Correlation	Sig.
		81	.366	.001

The results of the pre- and post-training instruments in large-scale trials obtained data that the correlation value between the two variables was 0.366, showing a strong and positive relationship. The level of significance of the relationship was 0.001, which was significant at the 0.01 level.

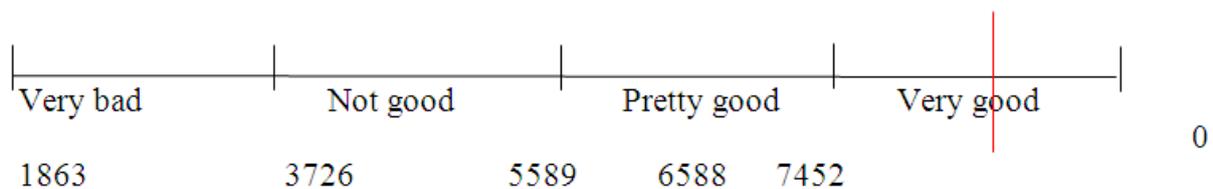
Table 1.7: Paired Samples Test

Paired Differences									
				95% Confidence interval of the Difference					
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Part 1	Pre-Test-Post-Test	-18.531	12.652	1.406	-21.328	-15.733	-13.182	80	0.000

The p-value of T-Paired test was 0.000, showing there were differences between before and after treatment. This means that there was a tendency improvement of teachers' pedagogical competency levels after treatment.

The results of training implementation evaluation were 88% or very good. These results were obtained from the sum of aspects assessed in the training evaluation questionnaire consisting of 23 aspects with four assessment columns. Of the 81 trainees, the highest score was $(23 \times 81) \times 4$ (highest score) = 7452, and the lowest score was 0. The total score obtained was 6588. So, based on these data, the level of assessment of training evaluation results on the implementation of training was $(6588:7452) \times 100\% = 0.88\%$ of the expected 100%. The continuum can be described as Figure 4.9 in which the value was 6588 located in very good categories.

Figure 1.4. Continuum results of the closed questionnaire of training evaluation in large scale trial



From the results of pre- and post-training instruments in large-scale trials, there was an improvement in teachers' pedagogical competence between before and after training. The results of training implementation evaluation also were in a very good category. Therefore, the implementation of trials for products produced in this research and development was considered sufficient and ready to be tested widely in the community.

Conclusion

The results of this study show that NLP training in the form of preferences, metaprograms, exploration equation, framing, and neurological level, has been able to help improve the

teachers' pedagogical competence of State and Private MTs in Surabaya Indonesia in understanding their students' characteristics. These pedagogical competencies include (1) Identifying the learning characteristics of each student, (2) Ensuring all of the students have the same opportunity to participate actively in learning activities, (3) Arranging the class so that all of the students have the same learning opportunities by considering physical disabilities and different learning abilities, (4) Trying to find out the causes of deviant behaviour of students and solve them, (5) Helping develop potential and overcome the shortcomings of students, (6) Paying attention to the students with certain physical weaknesses so that they can participate in learning activities and are not marginalised.

Recommendation

Based on the conclusions above, the recommendations of the results of this study are:

1. For the government

Through the Ministry of Religion and the Ministry of Education and Culture as institutions that administer the schools and madrasah throughout Indonesia, this NLP training can be used as an alternative choice of teacher development content that is routinely held every year to increase teacher's pedagogical competence.

2. For lecturers

This NLP training subjects can be used as additional material in the subject of educational supervision, educational psychology, human resource management, and educational insight as a provision of teacher candidates to recognise the characteristics of students.

3. For researchers

For other researchers who are concerned with education world, especially how to develop teachers' pedagogical competencies, this NLP training can be used as a foothold to be developed again in a broader and more complex dimension.

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REFERENCES

- Republic of Indonesia Government Regulation No.74 of 2008 concerning Teachers.* (2017). cited March 1, 2019, from the Education Office of East Kalimantan Province: <http://disdik.kaltimprov.go.id/read/pdfview/15>
- Adnot, M., Dee, T., & Wyckoff, V. K. (2017). Teacher Turnover, Teacher Quality, and Student. *Educational Evaluation and Policy Analysis*, 29 (1), 54-76.
- Ahmed, H. (2017). *Improving Leadership Skills by Using Neuro Linguistic Programming (NLP)*. Finland: VAASA.
- Aina, J. K., & Ayodele, M. O. (2018, January 15). Educational Reforms In Nigeria: The Kadunia State Teachers' Competency Test. *Open Journal of Educational Development*, 1 (1).
- Alzain, A., Clark, S., Ireson, G., & Jwaid, A. (2018, June 7). Learning Personalization Based on Learning Style instruments. *Advances in Science, Technology and Engineering Systems Journal*, 3 (3), 108-115.
- Amusiana, A., Abdullah, T., & Akbar, M. (2017). Effect Of Training, Pedagogic Competency And Self Determination Of Organisational Commitment In Teacher Administration Profession Of Vocational High School Business Management. *Indonesian Journal of Educational Review (IJER)*, 4 (2).
- Boon, N. Y. (2017). The role of headmaster to improve pedagogic competence of teachers in Vocational high school. *Technics technologies education management*, 12 (3), 207-213.
- Borg, S., Clifford, L., & Htut, K. P. (2018). Having an Effect: Professional development for teacher educators in Myanmar. *Teaching and Teacher Education*, 72, 75-86.
- Borg, W. R., & Gall, M. D. (1983). *Educational Research: An Introduction*, Fifth Edition. New York: Longman.
- Frey, K. S., Strong, Z. H., & Onyewuenyi, A. C. (2016, June 2). Individual and Class Norms Differentially Predict Proactive and Reactive. *Journal of Educational Psychologists*.
- Ibrahim, R. H., & Hussein, A. D. (2016). Assessment of Visual, Auditory, and Kinesthetic learning. *International Journal of Advanced Nursing Studies*, 5(1), 1-4.
- Ismail, S. A., & Jarrah, A. M. (2019, Januari). Exploring Pre-Service Teachers' Perceptions of Their Pedagogical, Preferences, Teaching Competence and Motivation. *International Journal of Instruction*, 12(1), 493-510.



- Kaynaradağ, A. Y. (2017, Juni). Pedagogy in HE: does it matter? *Studies in Higher Education*.
- Ministry of Education and Culture. (2007). *Copy of Attachment to the Minister of National Education Regulation Number 16 Year 2007 Dated May 4 2007 Concerning Teacher Qualification and Competency Standards*, cited March 2, 2019, from the Ministry of Education and Culture: <http://vervalsp.data.kemdikbud.go.id>
- Kependidikan, K. P. (2010). *Guidelines for Implementing Teacher Performance Appraisal*. Cited October 23, 2016, from Professional Grade: bermutuprofesi.org
- Lewthwaite, S., & Nind, M. (2017). LePedagogic Language and Pedagogic Competence: Does it Make Sense to Talk about Research Methods in Pedagogy in the Social Sciences? *European Conference on Educational Research*. Copenhagen: <http://eprints.ncrm.ac.uk/4043>.
- Marashi, H., & Abedi, M. (2017, September). The Impact of Neuro Linguistic Programming on EFL Teachers' Reflective Teaching. *i-manager's Journal on English Language Teaching*, 7 (3), 22-28.
- Maulipaksi, D. (2016). *7 Provinces Get the Best Value in Teacher Competency Test 2015*. Cited April 11, 2016, from the Ministry of Education and Culture: <http://www.kemdikbud.go.id>
- Moyo, L., & Hadebe, L. B. (2018). Education Challenges Affecting Research and Skilful Teaching-Learning (Pedagogies) In Zimbabwe. *European Journal of Alternative Education Studies*, 3 (1).
- Naim, M. (2017). Soft Skill Development: *Language in India*, 17 (2), 160-176.
- Nasional, K. P. (2010). *Minister of National Education Regulation Number 35 Year 2010 Concerning Technical Guidelines for the Implementation of Teacher Functional Positions and Credit Scores*. Cited November 19, 2017, from East Java Ministry of Religion: <http://jatim.kemenag.go.id>
- Priscylio, G., Rochintaniawati, D., & Anwar, S. (t.thn.). Needs of integrated science textbook for junior high school based on learning style (descriptive research). *International Conference on Mathematics and Science Education*. 3. Indonesia: <http://science.conference.upi.edu/proceeding>.
- Ramlawati, Mun'im, A., & Yunus, S. R. (2018). Improving Pedagogical Competencies of Prospective Science Teachers to Develop Learning Materials through Jigsaw Cooperative Models. *2nd International Conference on Statistics, Mathematics, Teaching, and Research*. <https://iopscience.iop.org/article>.



- Ricahyono, S., & Arifin, S. (2016, January). *Training of Activity Arrangement of Learning PAIKEM Innovative. Jurnal Terapan Abdimas*, 1 (1).
- Roese, N. J., Smallman, R., & Epstude, K. (2017). Do Episodic Counterfactual Thoughts Focus on Controllable Action?: The Role. *Journal of Experimental Social Psychology*, 73, 14-23.
- Rooyen, E. V., & Ebrahim, S. (2018). Developing Tomorrow's Leaders: Applying Neuro-Linguistic Programming Techniques in Public Affairs Education. *The 3rd Annual International Conference on Public Administration and Development Alternatives* (pp. 309-317). South Africa: [http://ulspace.ul.ac.za/bitstream/handle/10386/2252/vanrooyen_developing_2018.pdf?sequence = 1](http://ulspace.ul.ac.za/bitstream/handle/10386/2252/vanrooyen_developing_2018.pdf?sequence=1).
- Samsudin, S., Kamalden, T. F., Aziz, A., & Ujang, A. F. (2019). Effectiveness of Outdoor Education Program on Physical Education Student Resilience. *International Journal of Innovation, Creativity and Change*, 9 (12).
- Savardelavar, M., & Kuan, G. (2017, 3 31). The Use of Neuro-Linguistic Programming as an Educational-Therapeutic Program: Two Case Studies. *comEducation in Medicine Journal*, 9 (1), 49-58.
- Seitova, S. M., Kozhasheva, G. O., Gavrilova, Y. N., Tasbolatova, R., kpebaeva, G. S., Kydyrbaeva, G. T., et al. (2016). Peculiarities of Using Neuro-Linguistic Programming Techniques in Teaching. *IEJME - Mathematics Education*, 11 (4), 1135-1149.
- Senge, P. (1996). *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Doubleday Currency.
- Sneel, J., & Lefstein, A. (2018). "Low Ability", Participation and Identity in Dialogic Pedagogy. *American Educational Research Journal*, 55 (1).
- Sugiyono (2015). *Educational Research Methods*. Bandung: Alfabeta.
- Sulaiman, T., Ibrahim, A., Rahim, S. A., Hakim, M. N., & Omar, R. (2019). Model of the Relationship between Knowledge, Skills and Disposition of Alternative Assessment and Higher Oeder Thingking Skills among Educators. *International Journal of Innovation, Creativity and Change*, 9 (12).
- Turan, H., Kodaz, K., & Turan, G. (2016). The Effect of NLP Education on the Teaching Profession. *Int J Edu Sci.*, 15 (1,2), 120-125.



Weng, F., Ho, H. J., Yang, R. J., & Weng, C. H. (2019). The Influence of Learning Style on Learning Attitude with Multimedia Teaching Materials. *EURASIA Journal of Mathematics, Science and Technology Education*, 15 (1).