PEDAGOGY, CULTURE AND CHARACTER BUILDING

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Abstract

Indonesia is a big country that consists of 34 provinces, has many different cultures, languages and different way of thinking. These conditions cause big problems in preparing teachers for schools in different provinces. Some of these cultures are not synchronous to the characters needed for learning. The questions will be "how should the pedagogy be done (practiced) by teachers in the teaching and learning processes so that the qualities of learning and achievement of the students can be made better and the same level of knowledge understanding?". To be able to teach students of different cultures, teachers should:
1. understand well the theory of pedagogy and its practice in the teaching and learning
   process,
2. have good knowledge of the subject he / she teaches,
3. understand well cognitive psychology,
4. know well the characteristics of the students,
5. open to discuss and can respect the faith of students.

The core of pedagogy is to educate students to become well-rounded human, intellectually competent, respect to others of the same or different faith, open to discuss about the different culture and faith, can manage his emotion, and strive to have a good adversity quotient, can love each other although different in faith and character. This paper will describe some of my experiences to teach students mathematics in some provinces in Indonesia by practising the theory of pedagogy described above.

Keywords: pedagogy, culture, character

Introduction

The progress of sciences that has been achieved by humans up to now make the task of educators, especially lecturers and teachers increasingly heavy and challenging. Various emerging theories, such as the theory of multiple intelligences of Howard Gardner (2003), the theory of emotional intelligence of Goleman (1996), the theory of intelligence that transform the barriers into opportunities (adversity quotient) of Stoltz (2000), and the theory of neuro science need to be understood or mastered by lecturers and teachers, and practiced in the the teaching of subject matter they teach in the classroom to students. In particular, lecturers and teachers of

mathematics, it is necessary to have a good mentality and endurance test, because many students who are less (not) like mathematics owing to their dominant intelligence is not mathematical/logical intelligence.

From the perspective of pedagogy, lecturers and teachers need to serve students in such a way as to respect their dominant intelligence, and strive to improve their other intelligence in order to succeed in constructing and mastering the knowledge of the subject nurtured by the lecturer or teacher. Lecturers and teachers of mathematics for example, do not have to force students who have dominant intelligence rather than mathematical/logical to achieve the same achievement in the field of mathematics as students whose dominant intelligence is mathematical/logical intelligence. In addition, each student also has different emotional intelligence and adversity quotient. It makes the atmosphere of teaching and learning of a subject in different classes is different. They are challenges for lecturers and teachers so that their students can achieve learning objectives according to demands based on pedagogic theory they understand. There are many factors that influence the student's personality and ability to understand the knowledge he or she receives from the lecturer or teacher, or that constructed by him-/herself.

In addition to the aforementioned, any lecturer or teacher consciously or unconsciously has his or her own philosophy relating to the subject he or she raises or relates to the learning theory of the subject. All of the factors mentioned above affect the learning process designed and executed by the lecturer or teacher in the class which also affects the attitudes and character of students.

Based on past experiences in observing the learning process of teachers in the classroom or in the training of teachers in various regions, many teachers are less aware of the need to build the character of students, for example the teacher lets them fuss in class or talk to other students

when he explains a teaching material, or scolding students who do not pay attention to what he teaches. If the development of this character is not taken into consideration by the teacher or not developed by students in their mind starting from elementary school level. then they will bring their bad character to the next level even up to a higher level of school. For example at Sanata Dharma university itself, many students are noisy outside the classroom, with the effect disrupting the concentration of lecturers who lecture and students who are studying inside. In other words, many of the pedagogical aspects did not work well, both at the school and at the college level.

This raises the question:

1. Is pedagogic theory not being considered in the school where students studied before?

2. Are lecturers or leaders at Sanata Dharma themselves lacking in pedagogical theory to allow Such behavior to occur without any steps to improve the situation?

3. Does our cultures tolerate such behavior?

4. Are such characters already considered as part of our culture and have nothing to do with the ability to raise or develop knowledge?

Pedagogy

What is Pedagogy? Some definitions are:

1. Pedagogy is the art or science of teaching.

2. Pedagogy is the discipline that deals with the theory and practice of teaching. It means that theory of pedagogy concerns with teaching strategies, teacher actions in learning, teacher's judgment and decisions in learning execution, understanding the characteristics of students and their needs, students' intelligences especially their dominant intelligence , emotional

intelligence, adversity quotient, background of each student, teacher and student communication, teacher's assessment of student's learning process and outcomes, and student's attitude and character.

A. Multiple Intelligences

According to Gardner (2003), each person has 7 intelligences (*intelligence is not talent or natural ability which is derivative and permanent but can be developed and enchanced*), but then he finds two other forms of intelligence (see Suparno, 2004). So, according to Gardner there are 9 types of intelligence.

a. Verbal / Linguistic Intelligence

b. Spatial Intelligence

c. Musical / Rhythmic Intelligence

d. Mathematical / Logical Intelligence

e. Kinesthetic / Physical Intelligence

f. Interpersonal Intelligence

g. Intrapersonal Intelligence

h. Natural Intelligence

i. Existential Intelligence.

Among these only one is the dominant for each human. That means, that all students in a classroom do not have the same dominant intelligence.

B. Emotional Intelligence

Emotional Intelligence (EI) is the ability and skill of a person perceiving, accessing and managing his own emotions, the emotions of others and the emotions of a human group.

According to Mayer and Salovey, emotional intelligence includes:

a. ability to perceive precisely the emotions of him-or herselve,

b. the ability to use emotions to facilitate thinking,

c. ability to understand the meaning of emotions,

d. ability to manage emotions.

Salovey and Mayer (2000) (in Emotions and Emotional Intelligence: http://www.socialresearchmethods.net/galery/young/emotion.htm), mentions that EI summarizes Gardner's inter- and intrapersonal intelligence and includes capabilities that can be categorized into 4 domains:

1. Self-awareness:

   Observe yourself and recognize that feeling as it arises.

2. Managing emotions:

   Handling (feeling) and realizing what's behind the feeling; find ways to handle fear and anxiety, anger and sadness.

3. Motivate yourself:

   Channel emotions to serve a purpose; controlling your own emotions; delaying satisfaction and withholding impulses

4. Empathy:

   Sensitivity to other people's feelings and take their perspective; appreciate the difference how people feel something.

5. Having a relationship

   Maintain (manage) emotions while communicating with others; developing social competence and social skills.

According to Daniel Goleman (1996), emotional intelligence is:

a. the ability to identify and name a person's own emotional state or person and understand the linkage between emotions, thoughts, and activities (actions),

b. the ability to understand and cultivate a person's emotional state, controlling emotions or changing/shifting unwanted emotions to a better or acceptable state,

c. ability to enter the emotional state in accordance with the drive to achieve a goal or drive to succeed, readiness and sensitivity to the feelings of others and influence it,

d. the ability to enter and maintain a satisfactory relationship with others.

Developing Emotional Intelligence is done by:

a. Controlling your own emotions and awareness of your own emotions.

  1. knowing and realizing your own emotions.

  2. understand and predict a person's emotional reaction to a situations.

b. Empathy: Requires the ability to understand how a person perceives a situation, including how others perceive an event or event. Empathy requires knowledge of others' perspectives and sees something from one's value system and beliefs.

Empathy is the ability to be fully engaged in the viewpoint of others.

Characteristics of empathy:

1. Not investigating

2. Not supporting

3. Not advising

4. Not interpreting

5. Not blaming

c. Social Skills: Social skills are the ability to build relationships and social ties with others based on human equality.

d. Personal Influence: Personal influence is the ability to inspire others through examples, words or deeds. This is the ability to lead others through social skills.

Personal influences are also the ability to read the situation and exercise influence and leadership in the desired direction, including dealing with important issues or debilitating relation-ships, goals, missions and visions, showing motivation for one's vision, mission, core values and beliefs.

e. Vision Mastery: The mastery of this vision requires that the individual has the ability to set the direction and vision that is guided by a strong personal philosophy, and the ability to communicate and manifest with convincing direction and vision. Mastery of vision allows us to know ourselves and what we want to do for our lives.

Example: Introduction of emotions and empathic responses:

1. At one time a husband asked his wife, "Is this child indeed our child?"

   - Feelings to be expressed by the husband: Do not believe/suspicious.

   - Empathic response: Does it means, you hesitate on my loyalty?

2. One day, Risa travel with her brother by car in a high speed. Risa shouted,

   "Should we go so hurry?

   - Feelings to be expressed by Risa: Fear.

   - Empathic response: "Are you afraid because of my speed. Ok dear, I reduce it".

3. Siti was late for a fourth time in math lesson, with the reason her bicycle was broken. Her teacher reprimanded him by saying rather curtly, "Your excuses

are always the same!".

- Feeling that the teachers expressed: Bored

- Empathic response: Sorry Mom, that you are bored ya, to hear my reason!

C. Adversity Quotient (Stoltz, 2000)

Adversity Quotient (AQ) is Intelligence that transforms obstacles into opportunities.

- AQ tells a person about his or her ability to cope with adversity and overcome them.

- AQ can predict who is able to overcome difficulties and who will be destroyed.

- AQ predicts who will exceed expectations of their performance and potential and who will excel.

- AQ predicts who will surrender and who will survive. According to Stoltz (Stoltz, 2000, pp. 8-9), humans can be grouped into:

a. Quitters

Humans belonging to the Quitters are those who easily give up when faced with an obstacle.

b. Campers

Humans belonging to Campers are those who are satisfied if they are successful in solving a problem.

c. Climbers.

Humans belonging to Climbers are those who are resilient, not satisfied with the results they get but are always eager and eager to face challenges and solve big and difficult problems.

-According to Stoltz, this adversity quotient can be developed so it is not something fixed and inherited. Compared to intellectual intelligence and emotional intelligence, this intelligence provides more opportunities for success in life. According to Stoltz the core of success is persistence.

Culture

According to Bruner (1996), "culture shapes mind ... it provides us with the tool kit by which we construct not only our world but our very conceptions of our selfs and our powers". It means that we cannot uderstand mental activity unless we take into account the cultural setting and its resources, the very things that give mind its save account of the cultural setting and its resources, the very things that give mind its shave and scope).

Indonesia consist of 34 provinces, have about 483 ethnis groups and 719 ethnis languages (Kompas, 16 Juli 2017)

For example, Batak ethnis consist of 6 subcultures:

1. Batak Toba,

2. Batak Mandailing,

3. Batak Angkola,

4. Batak Simalungun,

5. Batak Karo,

6. Batak Pakpak

I my self, is Batak Toba and can not speak Karo language. The language of Batak Toba is easy to use for learning arithmetic.

English	Number	Batak Karo
One	1	Sada

Two	2	Dua
Three	3	Tolu
Four	4	Opat
Five	5	Lima
Six	6	Onom
Seven	7	Pitu
Eight	8	Ualu
Nine	9	Sia
Ten	10	sampulu
Eleven	11	Sampulu sada (ten and one)
Twelve	12	Sampulu dua (ten and two)
…	…	…
One hundred twenty-three	123	Saratus dua pulu tolu
Etc		

Batak language is coherent with the writing of numeral in mathematics. But, for example, Javanese language and Indonesian language is not coherent. For example, in Javanese language, they say "eleven" to express 11 and in Indonesian language also"eleven". Javanese langguages has three levels: Ngoko, Kromo Madya, Kromo Inggil.

In mathematics, 3 x 5 is 5 +5 + 5 (three times five), in Javanese language 3 x 5 is 3 + 3 + 3 +3 +3 (tellu ping limo) and in Batak language; 3 x 5 is 5 + 5 +5 (tolu hali lima) the same as in mathematics. That means, teachers from different culture need to learn the culture and language

of the peoples where they work. I sugest, in primary school, teacher can use ethnis languages (for example in Batak land is Batak language, in Sunda is Sunda language, in Middle Java and East Java is Java language, in Sumba is Sumba language, and so on) to teach mathematics in the first up to third grade.

Character Development.

Nowadays, Indonesia is facing a big problem, where many of its/its educated people have bad characters: corruption, narcotics, crimes, lack of tolerances, and so on. The quality of teaching in the school and the quality of students' learning are also not yet good. The achievement of Indonesian students In TIMSS, and PISA were bad, they stand in the lower rank. For example in PISA 2015, Indonesian partsipants have average score 386 in mathematics (stand in rank 63 among 70 participant country), in reading have average score 397 (stand in rank 64 among 70 participant country) and in science have average 403 score ((stand in rank 62 among 70 participant country). In mathematics, Singapore got the highest score 564, in reading Korea got the highest score 535 and in science Singapore got the highest score 556. The question is how to improve this achievement by mathematics teaching and learning in school? How to enchance the capacity of teachers, especially primary school teachers, so that during the teaching and learning process they can develop the students' character? Can mathematics education take a role in improving the students' character, so that later on the moral hazard can be reduced to the minimum and the mathematics capability of children will be better?

The results show us that characters (often called behavioral or behavioral habits, such as mocking comrades, disorderly, fear of mathematics, not being sincere, etc.) can be changed in a positive direction through education by practicing pedagogical theories, such as Ignatian pedagogy. For 16 years, from 2000 to 2016, I conducted training for teachers (especially

elementary teachers) in various provinces in Indonesia concerning how to teach mathematics by PMRI approach (realistic mathematics education in Indonesia) and before or after training I asked the teachers to give me an opportunity to teach students in class. The learning and learning process is recorded by video camera (to obtain data). In the teaching process for teachers and students I used the theory of Ignatian pedagogy, the theory of Vater Driyarkara (Memanusiakan Manusia) and the theory of Ki Hadjar Dewantara (Tut Wuri Handayani). From these experiences I can draw the conclusion that the character of students can be improved and their knowledge in the field of mathematics can also be improved by implementing correctly pedagogic theory.

Conclusion

From various experiences of training teachers and teachings in the classroom in different places of ethnis groups, by practicing the theory of pedagogy and the theory of cognitive psychology can be obtained better results in constructing and understanding knowledge of mathematics or knowledge in general.

List of Literatures

Bransford, J.D., Brown, A.L. & Cocking, R.R. (2001). *How People Learn. Brain, Mind, Experience and School*. Washington, D.C .: National Academic Press.

Bruner, J. (1996). *The Culture of Education*. Cambridge, MA: Harvard University Press.

Freudenthal, H. (1999). *Freudenthal Institute*. Utrecht: Universiteit Utrecht.

Gardner, H. (2003). *Multiple Intelligences. Kecerdasan Majemuk. Teori dan Praktek,* Aleksander Sindoro (translator). Batam Center: Interaksara.

Goleman, D. (1996). *Kecerdasan Emosional*. Translation of *Emotional Intelligence*. Jakarta: Gramedia Pustaka Utama.

Gravemeijer, K. (1994). *Developing Realistic Mathematics Education*. Utrecht: Freudenthal Institute.

Marpaung, Y. (2011). The Role of Mathematics Education in Developing Students' Character. (paper)

Stoltz, P.G. (2000). *Adversity Quotient. Turning Obstacles into Opportunities. Mengubah Hambatan Menjadi Peluang* Alih bahasa:I. Hermaya. Jakarta: Grasindo.

Solso, .R.L. (1991). *Cognitive Psychology*. Boston: Allyn and Bacon.