KI HADJAR DEWANTARA PHILOSOPHY OF EDUCATION IN TAMANSISWA PHYSICS LEARNING

Daimul Hasanah

University of Sarjanawiyata Tamansiswa, Jln. Kusumanegara No. 157, Yogyakarta, Indonesia
Corresponding email: daim_alhasan@yahoo.co.id

ABSTRACT

This study aims to find out the implementation of Ki Hadjar Dewantara philosophy of education in Physics lessons at SMA Taman Madya Ibu Pawiyatan Yogyakarta. The method used in this study was a descriptive-qualitative method. This research was conducted at SMA Taman Madya Ibu Pawiyatan Yogyakarta. There were four stages done in this study, among others: Pre-Field Stage, Field Stage, Data Analysis Stage, and Report Writing Stage. Data for this study were collected through interviews, observations, and documents. Instruments employed in this study included: interview guides, observation sheets, and documents. Meanwhile, the technique of examining the data validity of this study was done through data triangulation. The results of this study indicated that the teacher of Physics at SMA Taman Madya Ibu Pawiyatan Yogyakarta has had enough understanding of Ki Hadjar Dewantara philosophy of education, but not yet applied in the process of Physics learning. This was shown from the results of observations and interviews conducted by the writer during the process of learning Physics in the classroom, as well as the analysis of Physics learning devices used in learning Physics.

Key words:*Ki Hadjar Dewantara philosophy of education, Physics learning process*

A. INTRODUCTION

Ki Hadjar Dewantara has been an Indonesian educational figure since the Dutch colonial era. He had long developed an educational concepts adapted to the social, cultural, and religious conditions of Indonesian society. Not only explored the concept of education for indigenous peoples who were still colonized, but he also played an active role in implementing and engaging directly in the world of education and struggling through the development of education for indigenous communities by establishing Tamansiswa organization. The organization that built an independent spirit for indigenous peoples using the basis of the socio-cultural forces.

The historical experience of the Indonesian nation has proved that education is an important tool of struggle in achieving independence, national integrity, and national development. Education as a means of struggle to build national integrity has begun since the period of the nationalist movement against the invaders around the first decade of the twentieth century, with the aim of achieving independence.Furthermore, development which was a unity of educational system, was implemented after the achievement of independence to realize the ideals of a nation preserving the sovereignty of the government of the Republic of Indonesia, and ensuring the unity and unity of the nation, security, and justice for its citizens. In the current development period, the development of the national education system has been more advanced and is expected to give more prosperity for

its citizens, in addition to the unity of the nation and the formation of the nation's personality and culture.

At the beginning of his presence, Ki Hadjar Dewantara was more influenced by the new view of education in the West and elaborated his educational theory on the basis of cultural values of the nation (Java). From the point of education theory, he was influenced by the Montessori education theory which laid the award for the independence of the spirit of the child, the freedom to learn, the attention to the interests and the needs of the child, and the freedom to learn. The teacher's job was not to give knowledge to the child but to guide the children's learning according to their interests and development needs. Violence, punishment, and coercion should not be used in educating children, in the hope of developing an independent spirit.

An in-depth analysis of Ki Hadjar Dewantara's thoughts is indispensable. Theanalysis is expected to provide the re-actualisation of thought and implementation in the implementation of education. Currently, education in Indonesia is facing major challenges, on the one hand increasingly global life requires that education enables students to face the era of globalization along with its various consequences. On the other hand, education should act as a vehicle for the maintenance and development of noble culture of the nation, as the Indonesian national identity. The very wide and diverged heterogeneity of Indonesia requires special tips in dealing with the national education.

Based on all the above issues, it is interesting to review and re-examine the concepts of national education by Ki Hadjar Dewantara and Tamansiswa. Tamansiswa as a struggle organization has used education and culture as its devices. The teachings by Ki Hadjar Dewantara represent educational concepts that reflect the culture of the Indonesian's nation.Historically cultural, Ki Hadjar Dewantara's struggle in the field of education has the values which have been very meaningful to the Indonesian people in the fight against colonialism, to seize the independence of the Indonesian nation from the hands of the invaders, so that the Indonesian people were no longer oppressed by other nations. There are three struggles of Ki Hadjar Dewantara, namely: the pioneer of the national independence, the pioneer of the national education, and the pioneer of national culture.

Unfortunately, after Indonesian's independence, the rise and development of Tamansiswa finally realized its decline. This began when the founder's position who was Ki Hadjar Dewantara started to weaken towards the end of his life. In addition, the ideas of achieving order and peace has been drowned under internal disputes among branches in the region. The educational concepts of Ki Hadjar Dewantara and Tamansiswa are still well known by the community, especially among educators.Until now, the concepts are still renown, but the implementation is not like when Ki Hadjar Dewantara still lived, including in Tamansiswa environment itself. Therefore, it is very important to reveal and review the concepts and thoughts of Ki Hadjar Dewantara which contain the historical values of education in Indonesia. The researcher hopes that researching and re-examining the concepst and teaching by Ki Hadjar Dewantara open the perspective of educational practitioners, that the Indonesian nation has a very good national education philosophy, initiated by Ki Hadjar Dewantara, and Ki Hadjar Dewantara philosophy is based on the nuances of the populist and nationality.

Education is not only a matter of transfer of knowledge, but also transfer of value. The statement indicates that education not only results in intellectual people but arid of values, but also human beings in accordance with the values of Pancasila embraced by the Indonesian nation. One of them can be done with the learning process in the classroom. Learning not only provides a collection of concepts to students.Moreover, learning should be able to provide beneficial values to the students

when they return to the community. These values are certainly in accordance with the culture of the Indonesian nation and Pancasila. By ignoring the cultivation of moral values to the students, the education embodied in the learning process in the classroom is less able to build the student's personality and character. However, what happens today is that the learning process (the application of learning models) always refers to western countries and gives less attention to the culture and characteristics of students as Indonesians.

Physics is one of the existing subjects in SMA Taman Madya Ibu Pawiyatan Yogyakarta. Physics is only one of the many subjects that must be mastered by students. Teachers, in implementing the process of learning in the classroom, should not only transfer the Physics concepts to students, but also think about how to convey moral values in accordance with the culture and personality of the Indonesian nation. One is by adopting Ki Hadjar Dewantara philosophy of education in the context of Physics learning which clearly has used the nation's cultural base in accordance with the Indonesian culture.However, the reality of the implementation is still far from the expectation. In Tamansiswa environment itself, Ki Hadjar Dewantara philosophy of education has not been implemented in the context of school subjects, especially Physics, during the process of learning in classroom. What is happening today is that Ki Hadjar Dewantara philosophy of education is still limited to the theoretical course separated from certain context. Therefore, it is time for the educational concept of Ki Hadjar Dewantara as he is the national figure becomes one of the main references in the process of learning Physics because they are the most appropriate ones to the culture and personality of the Indonesian nation. Based on the problem, the purpose of this research is to investigate the implementation of Ki Hadjar Dewantara philosophy of education in Physics learning at SMA Taman Madya Ibu Pawiyatan Yogyakarta.

B. METHOD

1. Research Type and Approach

This research aims to find out how the implementation of Ki Hadjar Dewantara philosophy of education in Physics learning in Tamansiswa. The type of research is qualitative, while the method applied in this research was descriptive qualitative method. Qualitative research aims to understand the world of symbolized meaning in the behavior of society according to the perspective of society itself (Imam Suprayogo and Tobroni, 2001: 1). A qualitative research is one of the methods in obtaining the truth and it is included to scientific research built on theories which are developed from research and they are controlled on empirical bases. Thus, a qualitative research not only presents the data as they are, but also attempts to interpret correlation among the existing factors that include the point of view or the ongoing process. Meanwhile, qualitative research method according to Lexy J. Moleong is based on research foundation, research paradigm, problem formulation, research stages, research technique, criteria and technique of data examination, and analysis and interpretation of data (Sudarto, 1995: 63).A qualitative research studies existing problems and work procedures. This descriptive qualitative research aims to describe what is currently applicable. In the research there are efforts to describe, record, analyze, and interpret the conditions that currently occur or exist. In other words, the qualitative descriptive research aims to obtain information about the existing situation (Mardalis, 1999: 26).In fact, a qualitative descriptive research is designed to collect information about the conditions which are present now, concrete, and real (Convelo G. Cevilla, 1993: 71). Essentially, a qualitative descriptive research is a method of researching the status of a group of people, or an object with the aim of making description, or depiction which is factual and accurate for the phenomena being investigated (Convelo G. Cevilla 1993: 73).

2. Research Subject and Object

This research was conducted at SMA Taman Madya Ibu Pawiyatan Yogyakarta. The reason for choosing SMA Taman Madya Ibu Pawiyatan Yogyakarta as the research setting was because the school was founded by Ki Hadjar Dewantara and when he was still there, the college grew very rapidly, but after his passing, the school slowly declined. Subjects in this study were Physics teacher of Taman Madya Ibu Pawiyatan Yogyakarta. Meanwhile, the object of the research was the implementation of Ki Hadjar Dewantara phylosopi of education in Physics learning.

3. Data Type and Source

The types and sources of data used in this research were qualitative data. Qualitative data are data not in the form of numbers (Sutrisno Hadi, 1987: 66), but description in the form of a sentence (Burhan Bungin, 2000: 124). The qualitative data include:

a. Data on the general description of the research object

b. Other data which were not numeric

4. Research Stages

To conduct a qualitative research, it is necessary to know the stages in the research process. The stages are arranged systematically to obtain data systematically as well. There are four stages to be done in a study, namely: (Lexy J. Moleong, 2001: 85):

a. Pre-filed Stage

The pre-field stage is a field assessment stage. There were five stages carried out by the researcher, those were, among others:

1) Prepare the research design.

At this stage, the researcher has made a research proposal that has previously been discussed and approved by the promotor. The proposal preparation took approximately one month in form of discussion forums three times with one lecturer as the researcher's associate. The results of the discussions showed that it would be very important and urgent to raise a theme of educational research related to the values of Ketamansiswaan teachings proposed by Ki Hadjar Dewantara. Thus, a research proposal was then prepared entitled "Ki Hadjar Dewantara Phylosophi of Education in Physics Learning at Tamansiswa". The purpose of this research was to investigate the implementation of Ki Hadjar Dewantara philosophy of education in Physics learning at SMA Taman Madya Ibu Pawiyatan Yogyakarta.

2) Selecting research field

The researcher selected SMA Taman Madya Ibu Pawiyatan Yogyakarta as research setting because the school was founded by Ki Hadjar Dewantara who was one of the educational leaders of Indonesia whose values of teaching have begun to fade / disappear along with the development of science and technology. The rapid development of science and technology, without being supported by the cultivation of the nation's cultural values is feared to further erode the love of the homeland. This research has been carried out based on the above reasons.

3) Fields Exploration and Assessment

This stage was done to obtain a general picture of the school where this research activity would be conducted. One of the objectives was to make the researcher better prepared to go to the field and to assess the condition, situation, background, and context so that they could be tailored to the researcher's thought. This activity was held on July 3, 2017. The researcher also submitted a research permit to the principal Taman Madya Ibu Pawiyatan Yogyakarta.

4) Selecting and Employing Informant

At this stage, the researcher selected an informant who really knows and is directly involved in Physics learning process at SMA Taman Madya Ibu Pawiyatan Yogyakarta. The informant who was selected by the researcher was a Physics teacher. Then, the researcher employed the informant to facilitate the research activity. The informantwas Mrs. Ika Sabti Sulistyanti, S.Pd. as the Physics teacher of class X, XI, and XII in SMA Taman Madya Ibu Pawiyatan Yogyakarta. The informant gathered all information related to how the implementation of Ki Hadjar Dewantara philosophy of education in SMA Taman Madya Ibu Pawiyatan Yogyakarta.

5) Research equipment preparation

At this stage, the researcher has prepared everything required by this research. She has developed research instruments to collect data, including: interview guides for Physics teacher, observation sheets on Physics learning in the classroom, and sheets for documents analysis of Physics learning devices. In addition, she also prepared research support tools, such as cameras, camcorders, and voice recorder.

b. Field Stage

The field stage was divided into 3 parts, namely:

1) Understanding the research background and preparing ourself.

The research has been conducted at SMA Taman Madya Ibu Pawiyatan Yogyakarta which is located on Jln. Batikan Yogyakarta. The researcher has taken the research subjects of class X and XI Science. The number of students in each class was 14 and 10 students. The students' background was mainly graduated from SMP Taman Dewasa Tamansiswa Yogyakarta. The students also get Ketamansiswaan subject. In addition, the Physics teacher at the school has also taught Physics subject for 15 years. Based on these facts, the researcher's expectation was that the teacher and the students deeply understood Ki Hadjar Dewantara phylosophi of education and implemented it in their daily lives.

2) Field stage

At the time of conducting the research, the researcher has established a good relationship with the research subjects, namely: Physics teacher and the students of SMA Taman Madya Ibu Pawiyatan Yogyakarta. It was expected that a good relationship between the researcher and the Physics teacher created a conducive atmosphere for interviews with Physics teacher in order to obtain information and data needed in the research. Such a good relationship allowed the researcher to freely entered the classrooms to observe the ongoing process of Physics learning. This was done in order to obtain valid information and research data in accordance with the observations on the classroom activities.

3) Participating while collecting data

At this stage, the researcher has recorded and documented the research data obtained into the field notes, for data obtained from interviews, observations, and documents. There were three types of data obtained in this research, among others: transcript of conversation data between the researcher and Physics teacher through interview guide instruments recorded on the voice recorder; video data of Physics learning process in the classroom; and data on the document analysis of Physics learning devices.

c. Data Analysis Stage

Data analysis is a stage of organizing and sorting data into patterns, categories, and basic descriptive units in order to facilitate in determining the theme and formulating a working hypothesis appropriate to the data (Lexy J. Moleong, 2001: 103). At this stage, the data obtained from the three sources (interview data with Physics teacher, observation data of Physics learning process, and Physics learning device analysis data), were collected, classified, and analyzed with constant comparison.

d. Report Writing Stage

Report writing is the final stage of a research, so at this stage, the researcher has an influence on the results of report writing. Writing a report in accordance with the procedures of good writing, will produce good quality also to the research results.

5. Data Collection Technique

In order to obtain valid and accountable data, the data were obtained through:

a. Interview

An interview is an effort to get information closer by asking directly to informant. Without an interview, a researcher will lose information that can only be obtained by asking directly. The interview conducted in the research was unstructured one, by which this method allowed the questions to be flexible, the questions were more open, focused, so that the information obtained was rich and the talks were not rigid

(Singarimbun et al., 1989). In data collection, the researcher conducted interviews with Physics teacher. This was done in order to obtain data thoroughly and comprehensively in accordance with the current conditions.

b. Observation

Direct observation is a way of collecting data by careful and systematic recording. Observations must be thorough and systematic in order to obtain reliable results, and the researcher should have a broader background or knowledge of the object of study, theoretical basis, and the objective attitude (Soeratno 1995: 99). Direct observations conducted by researchers can be documented by noting all information related to the process of Physics learning activities in the classroom. By direct observation, the researcher understands the context of the data in various situations, meaning that it can gain an overall view. For that, the researcher can carry out direct observations in obtaining evidence related to the research object.

c. Document

It is the process of reviewing the data sources of the existing documents and it can be used to expand the data that have been collected. The document data sources are obtained from the learning devices of Physics, such as: Syllabus, Learning Implementation Plan (RPP), Module / Textbook, Student Activity Sheet (LKS), and Assessment Instrument.

6. Data Analysis Technique

The data reliability is achieved with (Lexy J. Moleong, 2001: 135):

a. Diligent observations; it is a series of structured activities carried out seriously and continuously to the existing reality in the research site and to discover the features and elements in situations that are highly relevant to the problem or event being sought, then focus on details by doing persistent and in-depth observations. So in this case, the researcher is expected to be able to elaborate in detail the continuity of the process on how the detailed discovery can be done.

b. Data triangulation,i.e. the checking technique of the data validity that utilizes other thing outside the data collected for checking purposes or as a comparison against the data. This can be in forms of the use of sources, methods of investigators, and theory (Lexy J. Moleong, 2001: 178). Among those various techniques which tend to use the source, as Patton suggests, refers to comparing and rechecking the degree of confidence of data obtained through different times and tools in qualitative methods. For that, the validity of data is obtained through the following way:
   1) Comparing the results of interviews and observations with data collected from interview
   2) b. Comparing the results of interviews with the contents of a related document
   3) Comparing what people say in general with what is said personally.

   What to know from this comparison are the reasons behind the difference (if there is a difference), not the common ground or similarity so that it can be understood and can support the validity of the data.

c. Colleague discussion,i.e. discussions conducted with colleagues who are able to provide input or refutation so as to provide stability to the results of research. This technique was used so that researcher could maintain openness and honesty as well as provide a good starting opportunity to start tracking and discussing research results with colleagues. Therefore, colleague examination through this discussion is informal and done by paying attention to interviews with colleagues, with the intention of obtaining a keen criticism to build and refine the research studies being carried out.

C. RESULT AND DISCUSSION

1. Result

a. Result of Observation in Physics.

Based on the result of direct observation, the prosesof Physics learning in Grade X is presented in Table 1.

Table 1. Physics learning process in Grade X

	Teacher Activity	Students Activity
A. Pre-activity		
1.	The teacher starts the process learning by extending greeting.	Students responds teacher's greeting.
2.	Teacher prepares the learning media and condition students to be ready to receive lessons.	Students are ready to follow lessons.
3.	Teacher reviews the previous lessons.	Students pay attention to teacher's explanation.
B. Core activity		
4.	Teacher explains the learning materials to students with interactive lecture methods and PPT slide media.	a. Students pay attention to teacher's explanation. b. Students record the contents of instructional material delivered by teacher. c. Some students who do not understand the content of the material on the PPT slide displayed by the teacher ask the teacher questions.
5.	Teacher explains again the contents of the material that the students have not understood with the lecture method, while writing on the board.	a. Students pay attention to teacher's explanation. b. Discussion between teacher and students. c. Students copy the teacher's explanation on the board on their respective notebooks.
6.	The teacher gives an example of the problem along with the solution / solution on the board.	a. Students pay attention to teacher's explanation. b. The student copies the teacher's explanation on the board, while asking if any writing or explanation of the teacher is incomprehensible.
7.	a. The teacher gives practice questions to test the students' understanding of the material content described by the teacher. b. The teacher asks one of the students to complete the exercise question on the board.	One of the students complete the exercise question on the board.
8.	The teacher corrects students' work on the board and discusses it together with other students.	Students participate actively.
9.	The teacher continues the explanation of the content.	Students pay attention to teacher's explanation.
10.	The teacher gives another example of the problem and asks one of the students to finish it on the board.	One of the students complete the exercise question on the board.
11.	The teacher corrects students' work on the board and discusses it together with other students.	Students participate actively.
12.	The teacher continues the explanation of the content.	a. Students copy the teacher's explanation on the board on their respective notebooks. b. Discussion between teacher and students on things that the students do not understand.
13.	The teacher gives practices.	Students do the exercises from the teacher.
14.	Together with students discussing the solution given by the teacher	Students participate actively.
C. Closing activity		
15.	Teacher and students together conclude the today content presented by the teacher.	Students participate actively.
16.	Teacher closes the learning process by "greetings".	Students responds teacher's greeting.

Based on the result of direct observation in the class, Physics learning in class XI is presented as follows:

Table 2. Physics learning process in Grade XI

	Teacher Activity	Students Activity
A. Pre-activity		
1.	Teacher starts the process learning by extending greeting.	Students responds teacher's greeting.
2.	Teacher checks the student presence.	Students have.
3.	Teacher reviews the previous lessons.	Students pay attention to teacher.
4.	Discussion between teacher and students because there is material that is unknown to the students.	Students discuss.
B. Core activity		
5.	Teachers form student learning groups and the learning method used is Jigsaw method.	Students are divided into 2 groups, each group consists of 5 students.
6.	a. For each group, teacher gives exercise sheets (5 exercises). b. The teacher gives the students the opportunity to ask if there is a problem that has not been understood. c. The teacher gives the students the opportunity to do the exercises.	Students do the exercises (each student only does 1 different problem).
7.	Teacher pays attention to student discussion process.	Students who get the same number of questions with other group members, then get together and form a new group to discuss the solution of the problem.
8.	After 10 minutes of discussion, teacher asks the students to return to their group of origin.	Students return to their original group.
9.	For each question, the teacher asks one of the students to work on the board.	One student listen and correct the work of his friend on the board.
C. Closing activity		
10.	Teacher and students together conclude the today's class.	Students participate actively.
11.	Teacher assigns homework.	Students pay attention to teacher.
12.	Teacher closes the learning process by "greetings".	Students responds teacher's greeting.

b. Result of Interview With Physics Teacher.

The teacher involved in this research was Ibu Ika Sabti Sulistyanti, S.Pd. She has been teaching Physics at SMA Taman Madya Ibu Pawiyatan Yogyakarta for 15 years. Based on the results of interviews with her, she knows the values of teaching Ki Hadjar Dewantara phylosophi of education. Among the many teachings of Ki Hadjar Dewantara, she only knew three, among others: Among System, Ning - Neng - Nung - Nang, and Tut Wuri Handayani. Among the three phylosophi of Ki Hadjar Dewantara, she can only understand the meaning of one of them, the Among System.She understood Among System with the meaning that to the students the teacher should be able to ngemong (nurturing), regard students as their own children, the teacher gives an example and the students follow or imitate the teacher, never scold the child, and advise him with a good word. Based on the interviews with her, she received learning devices in the form of handouts and syllabus of Physics from Subject Teacher Discussion (MGMP) of Yogyakarta City, while Physics Learning Implementation Plan (RPP) was developed by herself. The reason why RPP Physics was self-developed was because RPP should be tailored to the characteristics and context of Tamansiswa itself, so that its development should refer to the curriculum, vision, and mission of the school. Meanwhile, the teacher used the Student Activity Sheet (LKS) during the learning processPhysics was obtained from purchasing books from

publishers, and students were required to purchase and own it. The textbooks used in the Physics learning process were also obtained by the teacher through purchases from publishers. The books are then loaned out to students as a means to study Physics independently at home. The assessment instrument is self-developed by the teacher. Furthermore, she said that she has implemented the values of Ki Hadjar Dewantara's teaching on Physics learning tools (Syllabus, RPP, Modules / Books, Worksheets, and Assessment Instruments) all of which used in Physics learning process in the classroom.According to her, the values of Ki Hadjar Dewantara phylosophi of education have been integrated in the values of character education as contained in RPP. Review of RPP was done every semester, while syllabus was reviewed annualy. In developing learning tools, the teacher involve experts / experts, i.e supervisors from the Yogyakarta City office. The learning tools used in the Physics learning process at Taman Madya Ibu Pawiyatan Yogyakarta have been well documented every year by the teacher. Among the three aspects of student ability (cognitive, affective, and psychomotor), the teacher has considered these three aspects to measure student competence. To measure students' cognitive aspects, teachers develop and use test instruments, and the test instruments are well-documented by the teacher. The test instrument was self-developed by the teacher, without expert help.The implementation of Ki Hadjar Dewantara's philosophy of education has been integrated with the values of character education on developed test instruments. Meanwhile, to measure students' affective and psychomotor aspects, the teacher has not developed any and has not yet use the non-test instrument. To measure the affective and picophotogeni the teacher only used through direct observation activities in the process of Physics learning in the classroom (affective) and in practical activities (psychomotor).

c. Result of Document Analysis in the Form ofPhysics Learning.

Based on the result of document analysis of Physics learning device the components syllabus used in Physics learning consist of: Basic Competence, Learning Material, Learning Activity, Indicator, Assessment, Time Allocation, Learning Resources, and Character. In the character component, the character of students to be developed are: honest, responsibility, hard work, independent, democratic, curiosity, and communicative. In the Document Implementation Plan (RPP) of Physics, the components contained in the RPP include: Identity of RPP, including: name of educational unit, subject, class / semester, program, and number of meetings; Competency standards; Basic competencies; Indicators of Competence Achievement; Learning objectives; Learning materials; Time Allocation; Learning methods; Learning Activities; Assessment of Learning Outcomes; and Learning Resources. Character of students who are expected to exist in Learning Objectives on RPP include: meticulous, honest, tolerant, independent, democratic, communicative, and responsibility. The assessment instruments used were integrated within the RPP, in the form of multiple choice tests and descriptions / essay, while the measurement instruments on the affective (attitude) and psychomotor (skill) aspects are not documented by the teacher because the teacher has not developed the instrument yet.The Student Activity Sheet (LKS) documented by the teacher and used in Physics learning was obtained by the teacher from purchasing it to the publisher. Components contained in LKS, among others: Chapter Title, Competency Standards, Basic Competencies, Time Allocation, Nation Character, Concept Map, Apperception, Keywords, Content Content, Sample Problem, Glossary, Individual and Group Duties, Exercises, Competency Tests, Portfolio, Enrichment, Term Dictionary, and Nation Character Application. National character that is expected to appear in the students contained

in the LKS, among others: discipline, independent, meticulous, hard work, creative, innovative, focused on goals, not easily discouraged, responsible, and never give up. While the textbooks used in Physics lessons in the classroom could not be shown by the teacher because they were documented in the Library.

2. Discussion

Based on the results of interview with the teacher, the teacher said that one of the definitions of the *Among System* is that teachers give examples and students follow or imitate teachers. Reviewing Ki Hadjar Dewantara phylosophi of education, then the definition is not quite right. The meaning should be the definition of *Ing Ngarsa Sung Tuladha's* teachings. In full, the definition of *Ing Ngarsa Sung Tuladha* means a teacher is an educator who must set an example, he deserves being obeyed and imitated in his words and deeds (Bartolomeus Samho, 2010: 44).*Among system* itself represents a system of education that is family-based and hold onto nature and independence. The *Among system* according to the way is called *TutWuri Handayani* system (B. Boentarsono et al., 2012: 34). Meanwhile, nature's nature means that human nature is part of the universe (H.A.R. Tilaar, 1999: 132). The principle also affirms that every child / student on the one hand is subject to the laws of nature, but on the other hand is gifted with a potential mind to manage his life. In accordance with the nature of nature, education is a deliberate and planned action in order to develop the potential of students who are brought from birth. Furthermore, according to Nursid Sumaatmadja in Bartolomeus Samho (2010: 38) says that the principle of Independence means that life should be filled with happiness and peace. Education means giving students the freedom to develop their potential into professional skills and expertise assumed and lived responsibly.

Based on direct observation of Physics learning process, Physics learning process only takes place normatively, through pre activity, core, and closing. The values of Ki Hadjar Dewantara philosophy of education were only visible in the Core Activity, during "The teacher gives another example and asks one of the students to finish it on the board" and activities "The teacher corrects the students' work on the board and discusses it together with the other students(see Table 1, activities 10 and 11). According to the researcher, the activity was an implementation of *Tut Wuri Handayani* delivered by Ki Hadjar Dewantara. *Tut Wuri Handayani* means that a teacher is an educator who continuously guides, supports, and shows the right direction for the life and work of the students.

Based on the document analysis of Physics learning devices, both in Syllabus, RPP, and LKS, the character of the students that will be developed through the learning of Physics, is based on the values in character education, not the values oriented to the Ki Hadjar Dewantara phylosophy of education. Although there are similarities, they are very different. The values included in Character Education come from religion, Pancasila, culture, and national education goals (Kemendiknas dalam Nanang Purwanto, 2014: 189). There are 18 values in Character Education, among others: religious; honest; responsible; discipline; hard work; think logically, critically, creatively, and innovatively; independent; curiosity; love of science; tolerance; appreciate achievement; friendly/communicative; democratic; spirit of nationality; love the homeland; respect diversity; environmental care; and social care. Meanwhile, the values of Ki Hadjar Dewantara's teachings are more influenced by the new worldview of education in the West and outlines his educational theories with the basis of cultural values of the nation (Java). From the point of education theory, he was influenced by Montessouri's education theory which laid the award for the independence of the soul of the child, the freedom to learn, attention to the interests and needs of the child, and the freedom to learn.

Thus, the values of Ki Hadjar Dewantara teachings should not be integrated in the values of Character Education because those two things are different. Should also the values of Ki Hadjar Dewantara teaching expressed explicitly In Physics learning device used by the teacher in Physics learning in the classroom.

D. CONCLUSION

From the previous explanation, it is concluded that the teacher of Physics at SMA Taman Madya Ibu Pawiyatan Yogyakarta already has enough understanding of Ki Hadjar Dewantara philosophy of education, but not yet applied in Physics learning process. This is shown from the results of observations and interviews conducted by the researcher during the process of learning Physics in the classroom, as well as analysis of Physics learning devices used in learning Physics.

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