

## The Implementation of Tamansiswa Teaching Principles in Instilling Character Education to Face Industrial Revolution 4.0

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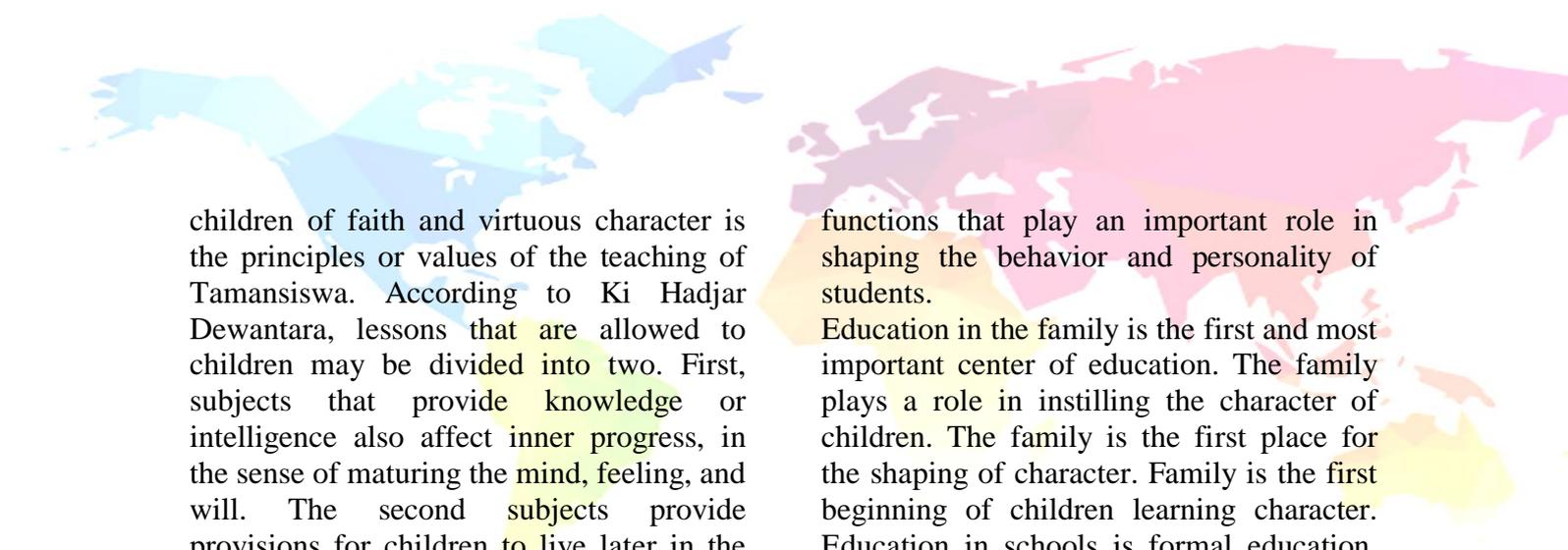
**Abstract:** Education must be able to promote character values as a foundation of the students' creativity so that they can possess sufficient technological skill in this Industrial Revolution 4.0. The present study aims to (1) find out the implementation of Tamansiswa teaching principles including (a) Student-Centred Learning (SCL), (b) applying the Leadership Trilogy, and (c) learning that develops students' creativity; (2) measure the tendency of students' characters. It is a descriptive study which employs a quantitative approach. Seventy-six teachers and 497 students from 3 provinces in Indonesia, including DIY, Central Java, and South Sulawesi were involved as the subjects of this study. The instruments used were interview guidelines and questionnaires. The results of the students' character questionnaire test obtained 96 valid items with a reliability of 9.28. The results indicate that: (1) The Implementation of Tamansiswa teaching principles covering (a) SCL, (b) Leadership Trilogy, and (c) Learning that develops student creativity has been in *good* and *very good* category or consideration; (2) The tendency of students' characters based on Tamansiswa values is in the *high* and *medium* categories. Therefore, character education needs to be more significantly strengthened and improved.

**Keywords:** Tamansiswa teaching principles, Character, Students

### 1. Introduction

Indonesian education should be able to develop potential, generate value, and build the students' behaviour so that they become competent and have characters. However, these noble educational goals have not been fully achieved. It is indicated by the many

problems that arise related to behaviour violates the nation's cultural values carried out by students ranging from elementary school, high school and even university students [1]. In addition, education is faced with the fourth Industrial Revolution era, known as the Industrial Revolution 4.0. This is an era of disruptive innovation, which is developing very rapidly. Industrial revolution 4.0 has a broader scale, scope, and complexity in contrast to the previous industrial revolution. Advances in new technologies that integrate the physical, digital, and biological worlds have influenced all disciplines, including education. To face it, the education must be prepared carefully by utilizing digital technology in the learning process or known as the cyber system so that the learning process can take place continuously without space and time limits. In addition, education must be able to inculcate the value of a character as a basis so that students are balanced in developing aspects of creativity and intention by promoting the human side (humanist) so that it would be wise to utilize these technologies for the benefit of society. In short, character education is essential to be strengthened to build a tremendous future generation [2]. One form of thought in the field of education, which has an essential meaning in shaping the character of



children of faith and virtuous character is the principles or values of the teaching of Tamansiswa. According to Ki Hadjar Dewantara, lessons that are allowed to children may be divided into two. First, subjects that provide knowledge or intelligence also affect inner progress, in the sense of maturing the mind, feeling, and will. The second subjects provide provisions for children to live later in the society; namely subjects that include the cultural and social field.

Such learning can promote students to be competent, have noble character and spirit to build the nation. Tamansiswa education is carried out by sharpening creativity (cognitive), affective aspect, and initiative (psychomotor) of humans. The implementation of education is not only limited to teaching because teaching is part of education. This study aims to (1) find out the implementation of Tamansiswa teaching principles in Schools including (a) SCL, (b) applying the Leadership Trilogy, (c) Learning that develops students' creativity; (2) measure the tendency of students' characters in school.

## 2. Literature Review

Education according to Ki Hadjar Dewantara (1952) is a cultural endeavor that intends to provide guidance in the life and growth of children's bodies and souls, so that later in the lines of his personal nature and the influence of all the circumstances that surround him, children can progress both physically and mentally, towards humanity. With the existence of that character, each human being stands as a free human (personal), who can govern or control himself (independent, *zelfbheersching*). There are three education centers according to Ki Hadjar Dewantara, namely education in the family realm, education in the realm of college (school) and education in the field of society (youth organizations). Thus, each educational environment in the family, school, and community has their respective duties and

functions that play an important role in shaping the behavior and personality of students.

Education in the family is the first and most important center of education. The family plays a role in instilling the character of children. The family is the first place for the shaping of character. Family is the first beginning of children learning character. Education in schools is formal education, which is carried out to promote knowledge, attitudes, and skills. Teachers have an important role in carrying out education. In addition to carrying out teaching to achieve competence in knowledge and skills, teachers also play a role in developing students' attitudes and character competencies. The term of a teacher in Tamansiswa is called "Pamong". In the Great Charter and Regulation of Tamansiswa Unity, it is stated that Tamansiswa Education is carried out based on the Among System, which is an education system that has a family spirit and is based on nature and independence. Next to paragraph (2) According to the system among each civil servant as a leader in the process of implementing education: *Tutwuri Handayani, Ing Madya Mangun Karsa, Ing Ngarsa Sung Tuladha*.

"Among" system puts children as central in the educational process; children are given the freedom to develop all the potentials that exist in themselves in accordance with the interests of their talents. Thus creativity will emerge, while the role of the teacher or *Pamong* is as a guide who directs when students experience difficulties or need help. The "Among" system is based on how it is called the *Tutwuri Handayani* System [1].

Learning is influenced by (a) parents with low educational attainment, (b) parents who show great interest in their children's studies; (c) students' personal confidence in their competence in facing and managing the demands of a challenging environment (d) students' positive perceptions are mainly characterized by students' shared, critical, and negotiating

controls. It is also directly influenced by (e) high-level learning readiness and (f) indirectly good mental health [3]. Measurement of attitude competence is different from the measurement of knowledge and skills competencies. Free but ideal education methods must pay attention to the characteristics and potential of students, allowing them to develop all the potentials following their interests and talents. Learning must be comfortable, warm, and student-centered. The teacher/tutor can use various models, approaches, strategies, and learning methods that are adapted to the characteristics of the children, the materials and facilities available in the school. Thus, the students will find their own knowledge, emerge creativity, and can produce innovative works [4]. A good educator must know how to teach, recognize the varied character of students, and understand the purpose of teaching. The goal is to achieve educational goals: intellectual qualification, strong character, and spirit to build the nation. The third education center is the community. Each community has characteristics as typical norms in the socio-cultural field that are different from other communities. The role of the community in education will bring about social interaction among community members.

The application of Tamansiswa teaching principles in schools can be demonstrated in the following aspects.

1. Student-centered learning
2. Varied use of sources, methods, and learning media.
3. The implementation of Asah-Asih-Asuh (educate, love and foster)
4. The teacher gives assignments that support students' creativity
5. The teacher does not distinguish students based on ethnicity and religion
6. In learning, the teacher knows when to execute *Ing Ngarso sung Tuladha, Ing Madya Mangun Karsa, and Tut Wuri Handayani*.

7. Learning by applying the Tri N approach: Niteni, Niroke, and Nambahi
8. Learning applies the concept of Tri Ngo (Ngerti, Ngrasa, and Nglakoni) or understands (cognitive), feel (affective) and do (psychomotor).[5]

Character values based on the principles of Tamansiswa include "Ngandel-Kendel-Bandel-Kandel." We must be "Ngandel" or believe in the power of God and believe in ourselves. "Kendel" or brave means not afraid because we believe in God and in ourselves. "Bandel" means toughness and trust. "Kandel" means having strong faith, inside and outside to fight for our desires.

Character education becomes very important for the inculcation of moral values and social values for students to be virtuous. Lack of knowledge and understanding of teachers in promoting character education is an inhibiting factor in making themselves as role models [6]. Character education is a growing discipline with a deliberate attempt to optimize students' ethical behavior. The outcome of character education has always been encouraging, solidly, and continuously preparing future leaders [7].

This study aims to (1) find out the implementation of Tamansiswa teaching principles including (a) SCL, (b) applying the Leadership Trilogy, (c) Learning that develops students' creativity; (2) measure the tendency of students' characters in school.

### 3. Material & Methodology

This research belongs to a descriptive study which employed a quantitative approach and consisted of three stages, namely (1) Concept and Instruments, (2) Data Collection and (3) Data Analysis and Reporting. The subjects in this study were 76 teachers and 497 students from 3 provinces in Indonesia, namely DIY, Central Java, and South Sulawesi.

Interview guidelines and questionnaires served as the instruments. The questionnaires were distributed to determine the implementation of Tamansiswa teachings principles and the value of students' character. The implementation of Tamansiswa teaching principles in this study is focused on three aspects covering (1) Application of SCL, (2) Application of Leadership Trilogy, and (3) Development of students' creativity.

The instrument for measuring students' character values consisted of 96 items arranged based on 4 (four) aspects of attitude competence. The statements on the questionnaire consisted of 48 items of valence (attitude) and 48 factual items (behavior) of 24 positive items and 24 negative items, respectively. The instrument scale used is a Likert scale with four alternative answers with a score of 1 to 4. To measure attitude competency based on Ki Hadjar Dewantara's teaching principles, expressive functioning attitude scale was done where the valence items are correlated with factual items that express attitudes and behaviors that reflect the value of attitude competencies based on the teachings of Tamansiswa. The compiled instruments were validated through expert judgment in the focus group discussion. The item validity test results obtained that all items are valid and the reliability results obtained Cronbach's Alpha number 0.928, which means a reliable instrument.

#### 4. Results and Discussion

Learning based on Tamansiswa teaching principles is a learning process using the "Among" system. "Among" system is a system that includes a family spirit based on nature and independence. Tamansiswa teaching implementation in this study consists of three aspects, namely (1) Student-centered learning, (2) application of Leadership Trilogy: *Ing Ngarso sung Tuladha*, *Ing Madya Mangun Karsa* and *Tut Wuri Handayani*, and (3) Learning that develops students' creativity.

The results indicate that the application of SCL is relatively good. The teacher is no longer the center of learning, but rather a facilitator. During the learning process, a variety of methods that can activate students is used, so that interaction occurred between the teacher and students as well as among the students. The application of SCL is shown in Figure 2.

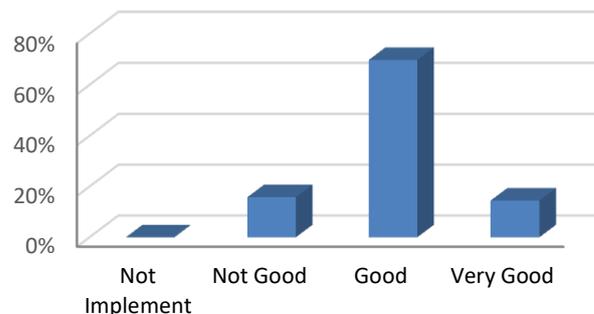


Figure 1. the Implementation of Student-Centered Learning

Figure 1 presents the application of SCL in schools for the good category is 70%, and a very good category reached 14%. However, there are still 16% of SCL implementation that is not good. Thus, some teachers have implemented SCL well, paid attention to students' potential in learning, and become facilitators. In the SCL learning approach, the teacher must be able to carry out his role well that is not only as a teacher, but also as a motivator, facilitator, and innovator. Teachers are not only required to teach in front of the class but also play a role in helping students to solve problems when students experience difficulties in the learning process [8].

The second application of Tamansiswa value in this study is the implementation of Leadership Trilogy: *Ing Ngarso Sung Tuladha*, *Ing Madya Mangun Karsa*, and *Tut Wuri Handayani*. It means that teachers should adjust their roles according to the situations. Sometimes they have to be the role model or *the sage of the stage*. In certain conditions, they do not need to be the leader; they can only provide motivation and enthusiasm to their students

in learning. When the students are more independent and can autonomously learn, the teachers can minimize their intervention; they can only give positive direction and influence whenever needed. The results of this study revealed that 95% of the schools have carried out the leadership trilogy *well* and *very well* (Figure 3), and 5% of the implementation is *not good*.

Application of Leadership Trilogy

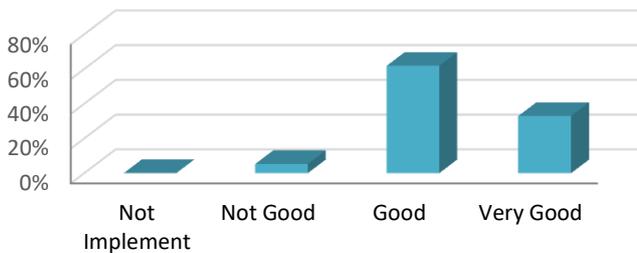


Figure 2. The Implementation of Leadership Trilogy

The role of the teacher is very important in developing students' characters, especially in facing the Industrial Revolution 4.0. Teachers must be able to be an example of how to behave and act following applicable norms. Teachers must also be able to arouse students' enthusiasm and motivation to promote active and fun learning. Besides, the teacher must be able to provide positive encouragement and influence so that learning objectives can be achieved. In other words, the application of Leadership Trilogy contributes to positive learning. It can lead to a condition where educators behave in accordance with applicable norms, promote effective learning, and foster the students to be ideal leaders and to become more disciplined and engaged in learning [9].

The third or the last trilogy is *Tut Wuri Handayani*. In this concept, the teachers are no longer the centre of learning. They follow students in developing interests and talents in accordance with the existing potential. Through this concept, the

creativity and innovation from students will emerge. Guidance and solution are given to the students if they experience difficulties.

Learning to Develop Student Creativity

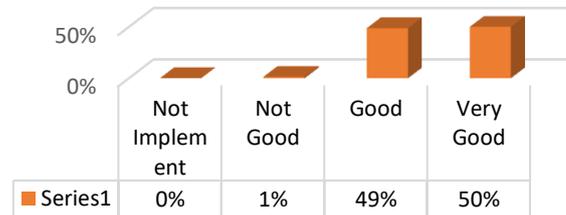


Figure 3. The Development of Creativity in Learning

Students' potentials must be fostered. Teachers should know how to develop these potentials that may be varied. As known widely, creativity is one of the most important factors to be promoted in facing the Industrial Revolution 4.0. Without creativity, everything will be left behind in this competitive and dynamic era [10]. The measurement to students' in schools that implement Tamansiswa teaching principles is done using questionnaire (of 96 items). It involved 497 respondents from three different provinces in Indonesia. The character values focused on this study are "**Ngandel-Kendel-Bandel-Kandel.**"

Based on the obtained data, the mean for student character scoring was 292.72. The Mean is between 288.00 and 312.00, revealing that *attitude* score is in the High category (T). The results can be described in the histogram below:

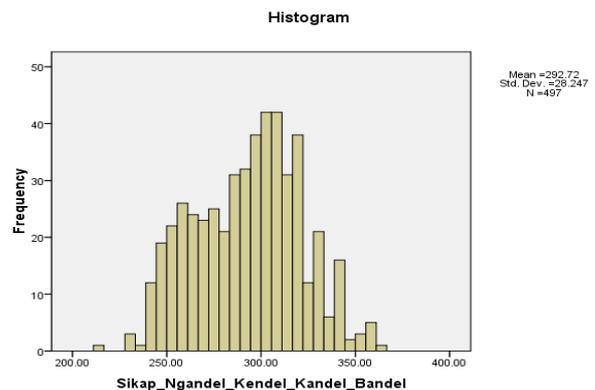


Figure 4. Students' Characters Histogram

The results show that in general, the mean for scoring students' characters represented by primary and secondary education in the provinces of Central Java, DIY and South Sulawesi totaling 497 students was 292.72. The mean is ranged between 288.00 and 312.00 in the High (T) category.

Attitude tendencies in each aspect are:

- a. The mean of the aspect of *Ngandel* is 73.46, ranged from 72.00 to 78.00 which means that the tendency towards this attitude is in the High category (T)
- b. The mean of *Kendel* aspect is 73.38 and reached 72.00 to 78.00, meaning that the tendency of this attitude is in the High category (T)
- c. The mean of *Bandel* is 71.35, reaching 54.00 to 72, which means that the tendency of this aspect is in the Medium category (Sd).
- d. The mean of *Kandel* aspect reached 74.53, ranging from 72.00 to 78.00, which means that the tendency of this attitude is in the High category (T).

Of the four-character values measured, *Bandel* aspect (tough, not easily discouraged) is still in the medium category, while the other three aspects are in the High category. According to Ki Hadjar Dewantara, *Bandel* includes strength and ability to thrive under difficulties and to start over again whenever failure happens [11]. The attitude should be instilled in students, especially in facing the challenges in this dynamic era. Six indicators of such attitude including 1) unyielding spirit (not easily giving up), serious desire in doing something to achieve goals/ideals, discipline, diligence, willingness for failure, and ( 6) optimism [12]. Therefore, this attitude which reflects toughness is manifested in the spirit of hard work, empowerment, and resilience as stated in the Ministry of Education and Culture on Strengthening Character Education (PPK) [13]. Students' characters values must continue to be

improved and become an important factor for instilling moral and social values as the basis in facing the Industrial Revolution 4.0.

## 5. Conclusion

- a. The implementation of Tamansiswa teaching principles in schools including (1) Student-Centered Learning (SCL), (2) applying the Leadership Trilogy, (3) Learning to develop students' creativity is well executed.
- b. The tendency of students' characters based on Tamansiswa values is in the *High* and *Medium* categories. Thus, the students, characters must be continuously trained and improved.

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