

The Effectiveness of the POE2WE Model in Developing Student Character to Face the Challenges of the 21st Century

Wahidin¹, Nana², Eko Sujarwanto³, Samuel Agus Triyanto⁴
^{1,2,3,4}Universitas Siliwangi, Tasikmalaya, Indonesia
Email: nana@unsil.ac.id

Abstract

This study aims to assess the character building of students who learn using the POE2WE learning model. Character building, which is the focus of research, is religion, nationalism, integrity, cooperation, and autonomy. The study sample consisted of 170 students from 284 students at Siliwangi University, Galuh University, and Institute of Health Science of Ministry of Health in Tasikmalaya. It was selected using a purposive sampling method. The research method is survey research. The validity and reliability of the instruments were measured using the Alpha Cronbach and Pearson's correlation. The results showed that students have good religious character, nationalism, integrity, cooperation, and autonomy in learning. Meanwhile, there was a relationship between religious character, nationalism, integrity, cooperation, and autonomy in learning. Finally, this study shows that the POE2WE learning model contributes to developing character education for students to face the challenges of the 21st century.

Keywords: *Character Building; POE2WE Learning Model; 21st Century Challenges.*



A. INTRODUCTION

Online learning is new to the majority of participants and currently, students are still in a transition period to study online so it needs to be prepared properly. Bao (2020) mentions strategies for dealing with the online learning transition period, namely preparing several backup plans if the initial plan in online learning occurs problems, dividing learning material into more concise units (than when learning face-to-face) so that students are more focused, emphasizing on the use of audio or voice of educators so that there is a sense of teaching, educators work in teams to support online learning, emphasize contextually active learning related to the environment of students, combine online learning with offline learning independently at home.

Character education is a focus for the development of students in Indonesia at the levels of basic education, secondary education, and higher education. Even online learning makes character education an important aspect to pay attention to. The characters that are the focus of character education are religiosity, nationalism, integrity, independence, and cooperation.

Religiosity is the thoughts and beliefs that a person has to see the world so that it affects their experiences and behavior in everyday life. Religiosity has five dimensions, namely: intellectual, ideology, public practice, private practice, and religious experience (Huber & Huber, 2012). Religiosity is different from spirituality,

religiosity comes from the word religion or religion. The thoughts and beliefs that a person has to see the world are called personal construct systems. Huber & Huber (2012) argue that a person's religiosity can be measured by the intensity of a person in carrying out their most prominent religious obligations and values. Huber & Huber (2012) divide the value of religiosity into five aspects, namely intellectual, ideological, public worship, personal worship, religious experience.

Nationalism is an understanding or teaching to love one's nation and state. Nationalist itself is a way of thinking, behaving, and acting that shows loyalty, concern, and high respect for the language, physical, social, cultural, economic, and political environment of the nation. The character of nationalism needs to be developed as early as possible to support the development of good and quality Indonesian human resources. Assessment of the character of nationalism can be carried out with an attitude scale because the indicators assessed include feelings, attitudes, and actions towards the dynamic existence of the nation. The indicators of nationalism according to Suwandi & Sari (2017) can be seen from being proud of being an Indonesian nation, loving the homeland and nation, willing to sacrifice for the nation, accepting diversity, being proud of diverse cultures, appreciating the services of heroes, prioritizing public interests. The value of integrity which is the focus of research is academic integrity. Many educators, students, and educational administrators uphold the principle of academic integrity because they know that the goals of teaching, learning, and research can only be applied to environments where ethical standards are upheld. Academic integrity is a major part of the academic culture and expectations of the values of honesty, professionalism, and trust to avoid academic fraud (Jiang et al., 2013; Kwong et al., 2010). Academic integrity characters include Honesty, Trust, Fairness, Respect, Responsibility, Courage

In online learning, students' independent character needs to be arranged so that it can develop. Also, the character of the students' cooperation needs to be developed. The two characters complement each other where the independent character will regulate the aspects of students internally, while the character of cooperation will be needed when students need to work together to process new information in the context of learning or when solving problems that cannot be solved by themselves.

One of the independent characters in the context of learning can be realized in the concept of self-regulated learning. Self-Regulated Learning is the ability to control all aspects of one's learning, from planning to evaluating learning processes and outcomes (Bruning, Schraw, Norby, & Ronning, 2004). Self-regulated learning makes a good contribution to student learning (Tasci & Yurdugul, 2017; Ellianawati & Wahyuni, 2010). The results of other studies also show that self-regulated learning has a relationship with academic learning achievement (Zimmerman B. & Schunk D. 2001; Azevedo & Cromley 2004; Butler & Cartier 2005).

Zimmerman mengusulkan model self-regulation meliputi *Forethought Phase*, *Performance Phase*, *Self reflection phase* (Zimmerman, 2000). *Forethought Phase* meliputi *Task analysis* dan *Self-belief/self-efficacy*. *Performance Phase* meliputi *Self control* dan *Self monitoring*. *Self reflection phase* meliputi *Self evaluation* dan *Self contingency*. Berdasarkan

model self-regulated learning Zimmerman, peneliti merancang indikator untuk mengukur self-regulated learning mahasiswa.

Zimmerman proposes a self-regulation model including the Forethought Phase, Performance Phase, Self-reflection phase (Zimmerman, 2000). The Forethought Phase includes task analysis and self-belief/self-efficacy. The Performance Phase includes Self-control and Self-monitoring. The self-reflection phase includes Self-evaluation and Self contingency. Based on Zimmerman's self-regulated learning model, researchers designed indicators to measure student self-regulated learning.

The character of cooperation in the context of learning can be realized in cooperative and collaborative learning. Cooperative and collaborative learning is by constructivism theory. Constructivism theory states that in building knowledge while studying, students need interaction with the social environment. Cooperative learning has elements of positive interdependence, social skills, and still emphasizes individual responsibility (Moreno, 2009; Kaendler, et al., 2016). Thus, the character of cooperation in learning can be trained through cooperative and collaborative learning.

This study aims to determine the character values possessed by students. The character values referred to are religion, nationalism, integrity, cooperation, and independence. The treatment given is the POE2WE learning model.

B. METHODS

This research is a non-experimental quantitative research with a correlational design. Statistical correlation is used to describe and measure the degree or relationship between two or more variables or a series of scores. Research activities include data collection through surveys, data analysis, data interpretation, which in turn formulate a conclusion. The research procedure can be seen in the following chart.

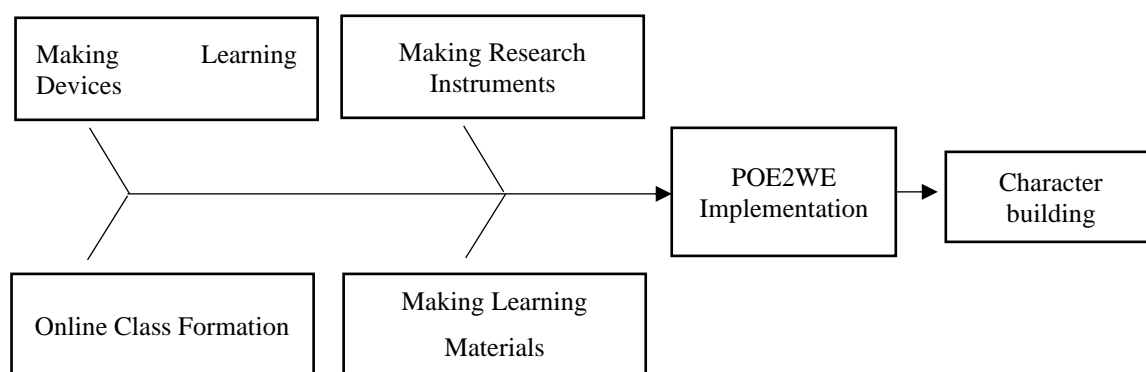


Figure 1. Research Procedure

Research subjects in this study were students of Physics education at the University of Siliwangi in the academic year 2020/2021, batch 2 and year 3. Data was collected through a survey method. The instrument used in the study was a list of questionnaires that were submitted and given to each respondent who was the research sample and research subject. The research variables were measured using a measuring instrument in the form of an ordinal scale questionnaire that fulfilled the

Likert scale type statements. The next data finding will be analyzed data using the percentage method to make it easier to answer problems related to research.

C. RESULT AND DISCUSSION

The results of non-experimental research using the survey method obtained data on the effectiveness of the POE2WE learning model on the character development of Physics education students, Siliwangi University. The results of the research include the character values of religiosity, nationalism, integrity, mutual cooperation, and independence which are described as follows:

Religiosity Value

The results of the religiosity value survey are presented based on the indicators and items that measure each indicator, as shown in the tables below.

Table 1. Intellectual Aspects

Respons	A	B	C
Strongly Disagree	0	0	0
Disagree	0	4	0
Doubtful	1	32	9
Agree	47	67	69
Strongly agree	78	23	48

Information:

A: I understand the teachings of the religion that I follow.

B: I am interested in problems or issues regarding religion.

C: I am interested in studying the topic of religion.

Table 2. Ideology Aspect

Respons	D	E	F
Strongly Disagree	0	0	0
Disagree	0	0	0
Doubtful	0	0	0
Agree	9	6	6
Strongly agree	117	120	120

Information:

A: I understand the teachings of my religion.

B: I am interested in problems or issues regarding religion.

C: I am interested in learning topics about religion.

Table 3 Public Practice Aspects

Respons	G	H	I
Strongly Disagree	0	0	0
Disagree	0	15	3
Doubtful	9	46	22
Agree	50	44	76
Strongly agree	67	21	25

Information:

M: I feel that doing worship in a place of worship is important.

H: I follow a religious community.

I: I attended a religious event

Table 4 Aspect Private Practice

Respons	J	K	L
Strongly Disagree	0	0	0
Disagree	3	1	0
Doubtful	42	9	2
Agree	56	54	35
Strongly agree	25	62	89

A: I do worship individually.

K: I pray suddenly when my heart is touched by an incident.

M: I try to approach God through prayer.

Table 5 Aspect Religious Experience

Respons	M	N	O
Strongly Disagree	0	0	0
Disagree	0	0	0
Doubtful	1	6	1
Agree	16	31	20
Strongly agree	109	89	105

Information:

M: I feel there is God's intervention in this life.

N: I experienced a situation where God seemed to show me the way or reveal something to me.

O: I went through circumstances that convinced me that God is real

Nationalism

The results of the survey on the value of nationalism are presented based on the indicators and items that measure each indicator. Research data related to the value of nationalism is presented in the following table.

Table 6 Proud as an Indonesian Citizen

Respons	A	B	C
Strongly Disagree	0	0	0
Disagree	0	3	0
Doubtful	3	46	3
Agree	38	54	46
Strongly agree	85	23	77

Information:

A: I believe that Pancasila is a way of life, the basis of the state, and an ideology country.

B: I use domestic products.

C: I am proud of the potential resources that the Indonesian state has.

Table 7 Love for the Fatherland and the Nation

Respons	D	E
Strongly Disagree	0	0
Disagree	0	0
Doubtful	1	0
Agree	36	26
Strongly agree	89	100

Information:

D: I can sing the national anthem of Indonesia Raya correctly.

E: I can mention the contents of Pancasila from the first principle to the fifth principle with right

Table 8 Willing to Sacrifice for the Nation

Respons	F	G	H
Strongly Disagree	0	0	0
Disagree	2	1	5
Doubtful	5	17	34
Agree	65	80	70
Strongly agree	56	29	22

Information:

F: I am willing to participate in defending the country.

M: I filled the independence of the Indonesian state by studying diligently.

H: I did community service in the neighborhood where I live.

Table 9 Accepting Diversity

Respons	I	J	K
Strongly Disagree	0	0	0
Disagree	0	0	0
Doubtful	2	0	0
Agree	54	36	53
Strongly agree	70	90	73

Information:

I: I value differences of opinion in discussion forums.

A: I am tolerant of friends who have different ethnic backgrounds, religions, races, and between groups.

K: I respect religious holidays.

Table 10 Proud of Diverse Culture

Respons	L	M	N
Strongly Disagree	0	0	0
Disagree	3	14	8
Doubtful	38	58	58
Agree	57	35	46
Strongly agree	28	19	14

Information:

L: I took the time to learn about the cultural wealth of the Indonesian state.

M: I actively participate in local arts and cultural activities.

N: I play an active role in preserving local culture.

Table 11 Appreciating the Merits of Heroes

Respons	O	P	Q
Strongly Disagree	0	0	0
Disagree	0	0	0
Doubtful	17	9	8
Agree	90	85	75
Strongly agree	19	32	43

O: I know the history of the struggle of the Indonesian people.

P: I actualize heroic values such as: courage, self-discipline, hard work, and independently.

Q: I emulate the spirit of heroism because it is important.

Table 12 Prioritizing Public Interest

Respons	R	S	T
Strongly Disagree	0	0	0
Disagree	0	1	0
Doubtful	1	24	1
Agree	44	70	52
Strongly agree	81	31	73

Information:

R: I prioritize politeness when interacting with other people.

S: I prioritize public interests over personal or group interests.

Q: I always respect everyone around me.

Integrity

The results of the integrity value survey are presented based on the indicators and items that measure each indicator. Research data related to the value of integrity is presented in the following table.

Table. 13 Honesty

Respons	A	B
Strongly Disagree	0	0
Disagree	0	0
Doubtful	8	10
Agree	70	69
Strongly agree	48	47

Information:

A: I provide complete and accurate information when working with group.

B: I always express my opinion according to what I believe.

Table. 14 Trust

Respons	C	D
Strongly Disagree	0	0
Disagree	1	0
Doubtful	30	11
Agree	69	81
Strongly agree	26	34

Information:

C: I always point out that there is no gap between inner words and deeds learning activities.

D: I did everything that I promised.

Table 15 Fairness

Respons	E	F
Strongly Disagree	0	0
Disagree	1	1
Doubtful	15	8
Agree	73	70
Strongly agree	37	47

Information:

E: I do the teacher's assignment honestly.

F: I am fair to other people in my relationships.

Table 16 Respect

Respons	G	H
Strongly Disagree	0	0
Disagree	0	1
Doubtful	1	27
Agree	57	70
Strongly agree	68	28

Information:

G: I appreciate the opportunity to acquire new knowledge.

H: I always take the opportunity to contribute to discussion activities.

Table 17 Responsibility

Respons	I	J
Strongly Disagree	0	0
Disagree	2	1
Doubtful	16	1
Agree	72	63
Strongly agree	36	61

Information:

I: I avoid apathy in the community.

J: I am responsible for the actions I take.

Table 18 Courage

Respons	K	L
Strongly Disagree	0	0
Disagree	3	4
Doubtful	21	14
Agree	76	64
Strongly agree	26	44

Information

K: I have the capacity to act according to valid values even though they are deep pressure.

L: I acted according to the wishes and beliefs that I had.

Gotong Royong

The survey results for Gotong Royong characters are presented based on the indicators and items that measure each indicator. Research data related to the aspects of Gotong Royong are presented in the following table.

Table 19 Positive Interdependence

	A	B	C	D	E
Strongly Disagree	0	0	1	0	0
Disagree	0	1	1	1	1
Doubtful	5	7	4	12	13
Agree	60	63	73	68	67
Strongly agree	61	55	47	45	45

Information:

A. In my group, group members can share ideas with each other.

B. Sharing of ideas occurs in groups.

C. In my group, group members respond to other members' ideas.

D. In my group, group members encourage / motivate other members to contribute to the development of the group.

E. When in groups, I get motivation from other members.

Table 20 Individual Responsibilities

	F	G	H	I	J
Strongly Disagree	0	0	0	0	0
Disagree	1	0	0	0	0
Doubtful	6	12	11	11	7
Agree	81	79	78	84	83
Strongly agree	38	35	37	31	36

Information:

E. In my group, group members explain the reasons related to the ideas / statements presented.

F. Each idea presented in the group is accompanied by an explanation.

G. In my group, group members share what is not known and what has been understood.

H. In my group, group members look for ways to make progress in their group.

I. In my group, group members try to make the group grow.

Table 21. Social Skills

	K	L	M	N	O	P
Strongly Disagree	1	1	0	0	0	0
Disagree	0	0	0	1	0	0
Doubtful	4	5	8	7	15	8
Agree	71	62	68	69	72	75
Strongly agree	50	58	50	49	39	43

Information:

K. In my group, Group members treat other members with courtesy and respect.

L. In my group, there is mutual respect and courtesy.

M. In my group, group members ask other members if they do not understand the ideas presented.

N. In my group, group members can ask other members' ideas if they don't understand.

O. In my group, group members can evaluate if there are other members' ideas that are not correct.

Q. In my group, group members can argue if there are other members' ideas that don't match up.

Independence

The survey results for independent characters are presented based on indicators and items that measure each indicator. Research data related to independent aspects is presented in the following figure.

Table 22. Indicators: Has short-term / long-term goals that must be achieved in learning

Respons	A	B
Strongly Disagree	0	0
Disagree	0	0
Doubtful	5	6
Agree	53	75
Strongly agree	68	45

Information:

A: I have short-term and long-term goals that must be achieved in learning / lectures

B: I clearly know my goals in learning / lecturing

Table 23. Indicators: have a plan/things that must be done to achieve the goal

Respons	C	D
Strongly Disagree	0	0
Disagree	2	1
Doubtful	19	30
Agree	77	71
Strongly agree	28	24

Information:

C: I have plans to achieve goals in almost every college meeting

D: I know what I have to do (learn) in preparation for almost every lecture meeting

Table 24. Indicators: having awareness about the provisions / abilities they have to achieve the goal

Respons	E	F
Strongly Disagree	0	0
Disagree	0	0
Doubtful	34	28
Agree	79	81
Strongly agree	13	17

Information

E: I have the ability to achieve goals in lecture meetings

F: With the abilities I have, I can achieve my goals in lecture meetings

Table 25. Indicators: notes positive/negative things related to learning progress

Respons	G	H
Strongly Disagree	0	0
Disagree	9	14
Doubtful	45	51
Agree	56	48
Strongly agree	16	13

Information

M: I made positive notes after class to monitor my progress

H: I made negative notes after class to monitor my progress

Table 26. Indicators: Able to motivate yourself

Respons	I	J
Strongly Disagree	0	1
Disagree	0	2
Doubtful	10	19
Agree	66	70
Strongly agree	50	34

Information:

I: I do certain things / actions to motivate myself so that I can achieve my goals in lectures

A: I am able to motivate myself while studying

Table 27. Indicators: evaluate whether the results achieved are acceptable or not

Respons	K	L
Strongly Disagree	0	0
Disagree	1	0
Doubtful	7	2
Agree	79	62
Strongly agree	39	62

Information:

K: I am improving something (for example how to study or study time) in order to achieve goals in lectures

L: I try to do better in my studies so that my goals are achieved

Table 28. Indicators: summarizes whether what has been done to achieve the results has been done well or needs improvement

Respons	M	N
Strongly Disagree	0	0
Disagree	1	3
Doubtful	10	56
Agree	90	58
Strongly agree	25	9

Information:

M: I am able to give an assessment of every effort I make to achieve expectations in lectures

N: The results I got were in accordance with the expectations I wanted

Data analysis is used to determine the effectiveness of the POE2WE learning model in the online learning process in the New Normal era and to find out the steps for learning the POE2WE Model in fostering student character to face the challenges of the 21st Century. Characters developed to face 21st Century challenges include: religiosity, nationalism, integrity, mutual cooperation, and independence. The mean value of each character of the Physics education student for the 2020/2021 academic year from the survey results was analyzed with the criteria of a score range based on the lowest score to the highest score so that the POE2WE model's effectiveness value was obtained in growing character values.

Data analysis focuses on the learning process using POE2WE online in relation to character education. The research data obtained are as listed in Chapter 5, then analyzed in general, namely the overall value of each character. The results of data analysis regarding the effectiveness of the POE2WE learning model on the character of Physics education students for the 2020/2021 academic year can be seen in Table 28.

Table 29. The effectiveness of POE2WE on Student Character

No.	Character	Average	Categories
1.	Religiosity	67.16	Very effective
2.	Nationalism	85.20	Very effective
3.	Integrity	50.48	Very effective
4.	Cooperation	68.50	Very effective
5.	Independence	56.40	Effective

Based on Table 28, several things that become the research findings, namely POE2WE in relation to character education are described as follows:

1. Religiosity

The score of the results of the survey on the value of religiosity in Physics education students for the 2020/2021 academic year was 67.16. Based on the method of calculating the range of scores listed in Chapter 4 Table 3.2, the criteria for the effectiveness of POE2WE on the value of student religiosity is very effective. This means that POE2WE is very effective in fostering the value of religiosity in Physics education students for the 2020/2021 academic year.

2. Nationalism

The score of the results of the survey on the value of nationalism in Physics education students for the 2020/2021 academic year was 85.20. Based on the method of calculating the range of scores listed in Chapter 4 of Table 3.2, the criteria for the effectiveness of POE2WE on the value of student nationalism are very effective. This means that POE2WE is very effective in fostering the value of nationalism in Physics education students for the 2020/2021 academic year.

3. Integrity

The score of the results of the survey on the value of integrity for Physics education students for the 2020/2021 academic year was 50.48. Based on the method of calculating the range of scores listed in Chapter 4 Table 3.3, the criteria for the effectiveness of POE2WE on the integrity value of students are very effective. This means that POE2WE is very effective in fostering the value of integrity in Physics education students for the 2020/2021 academic year.

4. Gotong Royong

The score of the results of the survey on the value of mutual cooperation among Physics education students for the 2020/2021 academic year was 68.50. Based on the method of calculating the range of scores listed in Chapter 4 Table 3.4, the criteria for the effectiveness of POE2WE on the value of student mutual cooperation are very effective. This means that POE2WE is very effective in fostering the value of mutual cooperation in Physics education students for the 2020/2021 academic year.

5. Independence

The score of the results of the survey of the independence value of Physics education students for the 2020/2021 academic year was 56.40. Based on the method of calculating the range of scores listed in Chapter 4 Table 3.5, the criteria for the effectiveness of POE2WE on student independence scores are effective. This means that POE2WE is effective in fostering the value of independence in Physics education students for the 2020/2021 academic year.

D. CONCLUSION

The characters of religiosity, nationalism, integrity, mutual cooperation, and independence are abilities that can be developed in learning. The development of the character of religiosity, nationalism, integrity, mutual cooperation, and independence need to be carried out continuously and developed in students gradually. The POE2WE model can be used to foster and develop characters of religiosity, nationalism, integrity, mutual cooperation, and independence.

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