

Early Detector Scale of Student Peace Level's

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Abstract: This research aims to adapt the Diamond Scale of Nonviolence (DSN) by Mayton II to the Indonesian version so that the standardized scale is obtained. By using a descriptive method of 438 students in some SMK Negeri Bandung and through the analysis of modeling Rasch, reported the entire item can be properly conception. Cronbach's alpha reliability includes very good categoration while unidimensionality is good-categorized. The internal consistency of the Indonesian version of DSN including intrapersonal, interpersonal, social, and global peace all belong to a good category. Implications, it is still necessary to research the Indonesian version of DSN further at the education level in Elementary, Junior High, or SMA/MA, or Pesantren to be obtained conclusive and comprehensive results. This research demonstrates the dynamics of movement and progress, as well as a good start to the development of the Indonesian version of the DSN that is rich in ethnicity.

Keywords: DNS, Rasch, unidimensionality, intrapersonal, interpersonal, social, global

I. INTRODUCTION

The education is based on order and peace since the 1920's has been initiated and confirmed by the Indonesian national education figure, Ki Hadjar Dewantara. "Order will not be there if it does not rely on peace. Conversely, there would be no people living peacefully, if he was in unites in all conditions of his life. But the orderly and peace created in the school must be free from compulsion, which is facilitated by a very democratic method "(Majlis Luhur Persatuan Tamansiswa, 2013, p. 48). The meaning of order and peace in the school refers to the dynamic state, with the free requirements of the element of injustice action.

Theoretical and empirical studies of comprehensive peace-themed in Indonesia are still limited. Historically, maintaining this peace is the mandate of the opening of the Constitution of the year 1945 paragraph four. The implications of the values and the spirit of life that are peaceful and harmonious need to be cultivated in such a way and must be an inevitator.

The education of peace in the 21st century is one of the important components and become a global discourse as a quality education. This is in line with the implementation of peace education whose structure is in line with UNICEF programs through the Millennium Development Goals (MDG, 2000) and the 16th point implementation of "Sustainable Development Goals (SDGs)" On "Peace, Justice, and Strong Institutions – Promote Peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive Institutions at all levels "(UNESCO, 2017).

In the regulation of the President of the Republic of Indonesia number 87 year 2017 on the strengthening of character education, in article 3rd the

main point asserted, that the implementation of the strengthening of Character education (PPK) is to implement the values of Pancasila, especially Peaceful love values. Reardon (1988), strengthening the education of peace as "a concept of dynamic, active process, and describing a condition where justice can be achieved, without violent behavior" (in Sudrajat, 2017). In addition, a child-friendly school has been developed, the school as an institution that is "safe and peaceful and can be a pioneer of nonviolent institutions", focusing on the effort to create the welfare of students in schools (Baswedan, 2016, p. 1; Lama (2016), Syrjäläinen, et al., (2015), Kartadinata (2016, p. 113), Gerstein, et al. (2014); Bangchun (2013), Sneddon (2010), Konu and Rimpelä (2002), Landau and Gathercoal (2000).

The various attributes relating to the tendency of peacefulness early on need to be accurately identified and developed to "respond to students' empowerment needs" (Tang in UNESCO, 2017) on the Development education system That is expected to inspire, encourage, and integrate from the development efforts of the students peace-of-mind. A student of peacefulness refers to a process of progression, behavior, value orientation, effort to improve circumstances, and conflict resolution in the lives of students to create and/or achieve a state of peace and harmony. Kartadinata (2014) emphasises that peace as a result refers to the "development process and not the end of the state of a process to achieve peace and harmony because peace is a state that must be preserved so that it is always Optimal conditions".

The theme of research and measurement instruments on the peace of students in Indonesia, until today is still limited. In the United States, Mayton has since 2001, 2002, and 2009, successfully construction

of the teenage Nonviolence Test (TNT) scale. Then it was adapted into the Indonesian version by Sudrajat (2017), Sudrajat, Kartadinata, and Suherman (2019), the concept of Pacificism (Elliot, 1980), Kool (1990), Kool and Sen (in Mayton II, 2009, p. 219), Philosophy of Mohandas (1957, 1951, 1921) and Gandian Personality Scale (GPS). RYFF's Research (1989) and Ryff and Keyes (1995) report that it is necessary to understand the level of intrapersonal peace, because it reveals how people relate to themselves. Self-acceptance proved to be correlated with relationships with others, and positively impacting happiness, life satisfaction, and directing the purpose of Life (RYFF 1989; Ryff and Keyes 1995).

The purpose of this research is to see whether the scale of detection of the level of peace is successfully translated and adapted so it is worth using to ensure the level of peace of high school students in Indonesia. In the end, this adaptation is expected to succeed and able to provide a widest opportunity to measure peace among Indonesian high school students and compare it with the results of Mayton, et al. (2011, 2012A, 2012b). The number of item DSN is 90, which is formed from four dimensions, which includes peace: intrapersonal (20 items), interpersonal (20 items), social (25 items), and global (25 items). The DSN shows good internal consistency ($\alpha = 0.85$ and 0.87), and test-reliability retest above 0.90 on the intrapersonal dimension, interpersonal, and global peace, the remaining 0.76 on the dimension of societal peace (Mayton, et al. 2012a). Both concurrent and discriminant validity for the DSN have also been empirically proven (Mayton et al. 2012b).

II. RESEARCH METHOD

a. Participants

The random samples for this study involved 438 students from five SMK Negeri Bandung that represent selected schools in the north, south, west, east, and centre, consisting of male students as much as 302 (68.95%) and female students as much as 136 (31.05%).

b. Procedure

This survey involved about 10 students who have been trained first in understanding the instruction of the instrument and the flow of research that will be conducted. So every school is visited by two student researchers. Firstly, the surveyor contacted the school leadership to ask for the research permit at the school and collaborated with the guidance teacher and counseling/counsellor appointed to use his BK service hours, a few day before the survey was conducted. Secondly, surveyors explain in detail in the classes of samples and answer students 'questions if there are certain items that have not been understood and motivate students to fill out the questionnaire carefully and seriously. The time span required to work on the DSN is about 40–50 minutes. Thirdly, after completing the questionnaire, each participant was given a light meal appreciation.

The pattern of propagation DSN has a range of very self-described (5), describing myself (4), quite

describing myself, (3) less describing myself (2), and not describing myself (1). Standardization of the Indonesian version of DSN refers to the idea Sumintono & Widhiarso (2014), "The advantages of modeling Rasch over other methods, especially classical test theory, the ability to predict the missing data, based on individual response patterns. These advantages make the statistical analysis results of Rasch's model more accurate in the research done, and more importantly, Rasch modeling is able to produce standard error measurement values for the instruments used, which can be Increase the accuracy of calculations. Calibration in Rasch modeling is done simultaneously in three terms, namely measurement scale, respondent, and grain ". An uncalibrated instrument has the possibility of generating invalid data and causing the research activity to be subjected to failure. Bond and Fox (2007) convey that the use of the Rasch model in the validation instrument will result in more holistic information about the instrument and more fulfilling the measurement definitions. Therefore, this study also used Rasch modeling in its data analysis.

To test the validity and reliability of the items used modeling Analysis Rasch (Sumintono and Widhiarso, 2015, p. 51-57) and Boone (2016, p. 1) which confirms, that: "Rasch analysis is a psychometric technique that was developed to improve the precision With which researchers construct instruments, monitor instrument quality, and compute respondents ' performances. Rasch analysis allows researchers to construct alternative forms of measurement instruments, which opens the door to altering an instrument in light of student growth and change. Rasch analysis also helps researchers think in more sophisticated ways with respect to the constructs (variables) they wish to measure.... "

III. RESULT

a. Reliability (consistency)

The reliability index of the person (0.91) includes a very good category with 2.94 separations, meaning grouping data is precise, the more diverse the group, so it is more representative. The reliability index of the item (0.99) includes the special category with the separation of 12.72, meaning that grouping data is precise, the more diverse the group, or more representative. The next, acquired interaction Reliability Index (consistency) between person-item (Alfa Cronbach) of 0.91 belongs to a good category once.

Table 1. Statistics Summary for 438 students

Summary	Mean Logit	Separation	Reliability	Alpha Cronbach
1. Person	0,01	2,94	0,90	0,91
2. Item	0,00	12,72	0,99	

b. Validity

The validity of the Indonesian version of the construct DSN (unidimensionality test) with the attention of raw-variance explained by measures equal to 35.4% (above 20%) and unexplned variance in 1st

contrast equals 6.4% (under 15%). This means that items in the Indonesian version of the DSN have a good category of measuring the diversity of respondents' abilities and are capable of measuring a comprehensive level of peace.

c. Validity and reliability of the DSN

The validity of all DSN items generates a positive number (Pt. Corr.). This means that the validity of all DSN items that are adapted into the Indonesian version can be appropriately described by the respondent. The value of the Cronbach Alpha of 0.91 belongs to the excellent category (Sumintono and Widhiarso, 2015, p. 109). Its unidimensionality index amounted to 35.4%, including the good categories (Sumintono and Widhiarso, 2014, p. 122).

d. Internal consistency

The Indonesian version of the DSN seems to have a good internal consistency for the four dimensions measured, with the Cronbach alpha coefficient of 0.75 on the intrapersonal peace dimension, amounting to 0.86 on the interpersonal peace dimension, amounting to 0.84 in the dimension Societal peace, and amounted to 0.80 in the global peace. There are no numbers that stand out on the internal consistency of these four dimensions of peace, although there are very subtle differences. More clearly these results can be seen in the following table 2.

Table 2: Internal consistency of the DSN

DSN Subscale	USA, 2012 (N=531)	Indonesia, 2019 (N=438)
1. Intrapersonal peace	0,90	0,75
2. Interpersonal peace	0,90	0,86
3. Societal peace	0,76	0,84
4. Global peace	0,90	0,80

e. Discussion

With respect to the dynamics of the reliability and validity index obtained, the Indonesian version of the DSN seems to be promising, because it has a good internal consistency with the alpha coefficient of Cronbach ($\alpha = 0.91$). Items in the Indonesian version of DSN are good at measuring the diversity of respondents' abilities and are capable of measuring one variable of peace level comprehensively.

IV. CONCLUSION

It is interesting to check back the background why almost all the items of the Indonesian version DSN (90 items) can be used or accepted. In this case, about 438 respondents responded appropriately. It means that 438 SMK students have the same perception and the instrument itself precisely in formulating each dimension of the DSN so that these instruments are reliable. The Indonesian version of DSN has successfully measured the level of peace of SMK students.

One of the advantages of this research is that it involves a diverse range of respondents, representing the areas of North, south, west, east, and central Bandung, but this still raises its limitations. First the sample came from one city that came from several selected schools that were taken based on simple random sampling so that the information was incomplete and intact. Secondly, the reliability of trials,

the concurrent coefficient and the validity of groups among the group of SMK students has not been refined by the context of dimension, gender, age, and class. Thirdly, the validity of the DSN has not been assessed or compared to other scales. Fourth, there is still a chance of discrepancies placing all the items of the American version DSN to be used directly in the context and culture of Indonesia.

There are some important and interesting things to do the next DSN research in Indonesia's ethnic rich context and culture. Firstly, it is necessary to know the validity and reliability of the DSN with the number of samples on the level of elementary, junior high school, SMA/MA, and Santri in Pesantren, both in the city and in rural areas. Secondly, the concurrent validity of the DSN will be linked to different scales, e.g. TNT Mayton (2009) and Indonesia's TNT version (Sudrajat, 2017) and Sudrajat, Kartadinata, and Suherman (2019), Pacifism Scales by Elliot (1980), Nonviolence Test (NVT) by Kool and Sen (1984), Gandhian Personality Scale (GPS) by Hasan and Khan (1983), Multidimensional Scales of Nonviolence (MSN) by Johnson et. al., The Nonviolent Relationship Questionnaire (NVRQ) by Eckstein and La Grassa (2005), "Self-assessment" of Nonviolence, Nonviolence Self-Inventory by French (2004), Nonviolence Inventory of Your Home and Family by Diamond (2001).

V. IMPLICATIONS

It is necessary to design more peace scale in Indonesia with various aspects and/or dimensioning, in addition to the TNT version of Mayton (2009) and the Indonesian version (Sudrajat, 2017; Sudrajat, Kartadinata, and Suherman, 2019) and the core values of peaceful and harmonious living from UNESCO and UPI (2000). This research demonstrates the dynamics of movement and progress, as well as being a good starting stage for the development of Indonesia's rich version of DSN.

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