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Development of Career Maturity Scale for Students of SMP Muhammadiyah Pakem

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Abstract

Career maturity in junior high school students needs to be emphasized and applied in life, considering the many negative impacts if it is not handled and taken seriously. It is necessary to measure through instruments related to career maturity as the first step in preventing adverse effects. This study aimed to develop a career maturity scale instrument for SMP Muhammadiyah Pakem. This research uses research and development (R&D) methods. The sample involved in this study amounted to 263 students of SMP Muhammadiyah Pakem, taken from classes VII and VIII. The results showed that: 1) the content validity carried out by five experts with the Aiken formula calculation showed a score of 0.87 with 29 items valid from 36 items; 2) the reliability test of the instrument using the Cronbach Alpha formula obtained a score of 0.776; 3) KMO value is 0.684; 4) Barlett's Test obtained is 0.00; 5) anti-image correlation and communality test aborted two items so that the remaining 29 items were in a suitable category; 6) the total variance of explaining with a percentage of 63.346%; 7) and of the 18 factors, 11 factors can explain the total diversity.

Keywords: *Scale; Career Maturity; Students of SMP Muhammadiyah Pakem*

Introduction

Career maturity is an individual's ability to make appropriate career choices, including awareness of what is needed to make career decisions and the degree to which individual decisions are realistic and consistent. Career maturity is a condition where students can understand their career choices by developmental tasks in the career field (Suwanto, 2016). Factors that can affect students' career maturity is their ability to plan career choices. Seeing the many negative impacts caused by the lack of career choice planning, of course, this should not be allowed. This behaviour should be taken seriously.

According to Supriatna (2009) also suggests various career problems experienced by students, namely: 1) Students do not understand how to choose a study program that matches their abilities and interests, 2) Students do not have sufficient information about the world of work, 3) Students still confused about choosing a job, 4) students are still unable to choose jobs that match their abilities and interests, 5) students feel anxious to get a job after graduating from school, 6) students do not have a

choice of a particular college or further education if after graduation they do not still in the world of work, and 7) Students do not yet have an idea about the characteristics, requirements, abilities and skills needed in the job, as well as job prospects for their future career.

Based on the results of pre-observation interviews with the BK Coordinator and at SMP Muhammadiyah Pakem on April 4, 2020, it is known that there are still approximately 60% of students still find it challenging to understand their abilities and potential. Students do not know their talents and interests, so they do not have life goals that match their abilities. The narrative confirmed this from the Principal of SMP Muhammadiyah Pakem that approximately half and even 80% of students still did not know they would continue their education to SMA/SMK. After being asked further, there are still many students who think that the career they will take is only limited to continuing their parent's job or working in a sand mine as a sand worker in a location near their home, being a factory employee is one of the choices for advanced careers, most of the students do not even there are also a few students who do not understand where to continue after graduation.

This condition indicates that the students of SMP Muhammadiyah Pakem do not have good career maturity and are not by the developmental tasks of junior high school students who should already have insight into the choice of further education level and the choice of work they will choose after graduating from school. This can become a severe problem if not followed up properly.

The follow-up that can be done is to provide intervention to create an increase in mature career preparation. The first step that can be taken is to measure the level of career maturity of the Muhammadiyah Pakem Junior High School students so far. Unfortunately, there is no standard instrument to measure career maturity for students developed in schools. In terms of usefulness, it is necessary to take concrete steps that focus on developing tools so that later they can be used as a standard reference in measuring the level of career maturity in junior high school students.

Career Maturity

According to Crites (Creed and Patton, 2001; Brown, 2002), career maturity is the suitability of an individual's career behaviour with the age of each stage of development. In addition, Super (Marpaung and Yulandari, 2016) defines career maturity as an individual's success in completing career development tasks typical for specific developmental stages. Super (Patton and Lokan, 2001) also argues that career maturity cannot be separated from career choice preferences, which is a process that continues to develop and is not a momentary event. In line with that, Super (Savickas, 2001) also explains that individuals are said to be mature or ready to make career decisions if their knowledge to make career decisions is supported by factual information about work based on exploration that has been done.

This is in line with the opinion of Gribbons and Lohnes (Juwitaningrum, 2013). They explain that career maturity is broader than just job selection because it involves individual decision-making and planning activities.

The opinions of some of these experts state that career maturity is a condition in which individuals have mastered the task of career development. In addition to having developmental studies, individual behaviour towards career stimuli can go hand in hand.

Research Methods

Development Model

The method used in this research is the research and development (R&D) method. Sugiyono (2014) said that R & D is a research method used to produce specific products and test the effectiveness

of these products so that later they can be helpful for the wider community. The development model used as a reference in this research is the development model by Saifudin Azwar. The development model was chosen because this research will focus on developing instruments related to psychological scales.

A psychological scale or scale is made to reveal aspects of an individual's personality, such as attitudes towards something, motivation, emotional stability, and so on (Azwar, 2018). The scale model used in this study is a Likert scale because it serves to measure attitudes, opinions, and perceptions about social phenomena. Researchers have previously determined this social phenomenon, from now on referred to as research variables (Sugiyono, 2014).

The development model procedure, according to Azwar (2011), consists of nine stages which include: 1) identification of measuring objectives, 2) limitation of measuring domains, 3) operational aspects, 4) item writing, 5) language testing, 6) field test, 7) item selection, 8) construct validity, and 9) final compilation. However, this research process will not wholly be similar to that procedure because it adapts to the needs of developing a career maturity scale instrument product for students of SMP Muhammadiyah Pakem. In stages 6 and 7, namely field tests and item selection, researchers will combine them in the field trial stage. Then the researcher changed the construct validation stage to the content validation stage, which involved expert judgment in the item review process considering that the career maturity scale instrument was still used in a limited way. Content validation is carried out simultaneously with the item writing stage.

Research Sample

This study involved a sample of 263 Pakem Muhammadiyah Junior High School students taken from all students in grades VII and VIII, which included rates VII A, VII B, VII C, VII D, VIII A, VIII B, VIII C, VIII D and VIII E.

Research Instruments

The instrument developed in this research is a career maturity scale instrument for SMP Muhammadiyah Pakem. There is a score in the career maturity scale instrument with the criteria Very Appropriate, Appropriate, Not Appropriate, and Strongly Disagree. Each bar has a weighted score of 4, 3, 2 and 1.

Metadata

Analysis in this study was carried out by going through the content validation and reliability tests. The validity stage involves experts (expert judgment) who are competent in guidance and counselling. Expert validation aims to obtain information about the instrument's suitability and the research objectives contained in the sub-aspects and indicators. Calculations using MS. Excel using the Aiken formula as follows:

$$V = s/[n(c-1)]$$

Description:

s = r – lo
lo = The lowest validity rating score (in this case is 1)
c = The highest validity rating score (in this case, it is 4)
r = Number given by the appraiser
n = Number of Experts

After testing the expert judgment, the researcher conducted a reliability test to determine the level of reliability of the instrument so that it can be trusted to be used as a data collection tool (Arikunto,

2013). The reliability test was carried out using the Cronbach Alpha formula, processed through the SPSS for windows version 22.0 calculation tool. The Alpha formula is used to find the reliability of instruments whose scores are not 1.00 and 0 (Arikunto, 2019). So the closer to 1.00, the higher the reliability.

Research Results and Discussion

Research

The research results are described based on the steps that have been taken to obtain a valid and reliable instrument. The results of developing career maturity instruments can be described as follows:

Identification of Measuring Objectives

At this stage, researchers seek and collect various theories related to career maturity from multiple sources such as textbooks, journals, and other literature that can provide information related to career maturity.

Measuring Domain

Limitation The intended limitation is to describe the theoretical construct measured into several clearer formulations of aspects. The researcher describes the formulation of career maturity aspects based on the theory presented by Crites (1973), where the sub-aspects of career maturity in question are individual successes to complete career development tasks that are typical for specific stages of development based on orientation to choice of majors, information and planning, consistency of vocational preferences, crystallization in character, and discretion of vocational preferences

Operational Aspects

After knowing the aspects and sub-aspects to be explored, the next step is to operationalize these sub-aspects in more concrete indicators. The goal is to make it easier for researchers to determine the direction of the expected response in each statement item. Based on the theory, obtained eighteen indicators of career maturity consisting of: 1) Able to understand the importance of having aspirations in a career; 2) Have knowledge of various career supporting factors; 3) Have ideals in a career in accordance with their interests and talents; 4) Have clear goals about the success of his career choice; 5) Able to plan a career in accordance with the ideals; 6) Able to communicate career planning with others; 7) Able to collect various information that supports the world of his career; 8) Have a strong reason for the choice of majors taken; 9) Able to adhere to the principles of the career choices taken; 10) Have a great interest in career options; 11) Have firmly held values as the basis for career choice; 12) Able to live independently; 13) Have emotional intelligence in doing something; 14) Have careful consideration of an option; 15) Have the characteristics in accordance with the requirements in the choice of career; 16) Participate in various trainings to improve self-quality; 17) Have clear goals in career choice for the future; 18) Dare to make wise decisions in the choice of career field. This indicator is then outlined in a grid consisting of 31 favourable and five unfavourable items. For each statement in this career maturity scale, students are given the following four alternative answers with a score of each consisting of Very Appropriate = 4, Appropriate = 3, Not Appropriate= 2, and Strongly Disagree= 1.

Item Writing and Content Validation

items in the career maturity scale are written based on the grid made at the operational stage of the aspect. The things that have been made are then reviewed by researchers and involve several expert judgments (experts). The researcher involved 5 Guidance and Counseling Postgraduate Program students from Yogyakarta State University in becoming expert judgments at the content validation stage. The five

experts are Guidance and Counseling S1 graduates from different universities, namely Yogyakarta State University, Sunan Kalijaga State Islamic University Yogyakarta, PGRI Palembang University and Ahmad Dahlan University

Due to the validation carried out by five experts with four assessment options (scores), the statement item will be said to be valid if it has a value greater than or equal to 0.87. The validation results show that 5 of the 36 statement items declared invalid consist of items numbered 15, 24, 27, 33, 34. The number of statement items in the instrument is valid as many as 31 items.

Language Trial

No problems were found at the language testing stage in the language presented in each question item. This is because the researcher has corrected the language that is not appropriate and is considered difficult to understand (less communicative) by junior high school students based on the criticism and suggestions given by the expert judgments at the item writing stage.

Field Trial

The field trial phase was carried out by researchers in class VII and VIII SMP Muhammadiyah Pakem. The scale was successfully tested on 263 students with the following results:

1. KMO and Barlett's test

KMO serves to see the suitability of the sampling, and if the value obtained is > 0.05, then it is considered by the sampling. At the same time, Barlett's Test determines whether each item in the instrument is included in the dependent or independent. If the score obtained is <0.05, it is declared mutually independent. KMO and Bartlett's test values can be presented in the following table.

Table 1. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.684
Bartlett's Test of Sphericity	Approx. Chi-Square	1539,688
	df	406
	Sig.	.000

Based on the table, it is known that the KMO value is 0.684. Because 0.684 > 0.5, the sampling in this study was declared appropriate. Then the value of Barlett's Test of Sphericity (Sig.) is known to be 0.00 where 0.00 < 0.05. So it can be said that each statement item in the instrument is mutually independent.

2. Anti-image correlation and commonality test. Anti-image correlation serves to see the correlation between items. If the score obtained by each entity is < 0.50, then the item will be declared void. In the calculation, there is 1 item dropped, namely number 11, which is then issued so that 30 statement items are remaining. The communality test on 30 items shows that there is 1 item that is dropped in the calculation, namely number 14, which is then removed so that there are 29 statement items left.

3. Total variance explains the percentage of total variance that the diversity of factors formed can define. In the calculation, the ratio obtained is 63.346%, which means that the complete variety that the diversity of elements formed can explain is 63.346%. This table also shows the eigenvalues of each factor formed. The number of factors/indicators used to describe the total diversity can be seen from the eigenvalues > 1. Based on the calculation, it is found that of the 18 existing factors, 11 factors can explain the total diversity.

4. Reliability test

The career maturity scale instrument was tested on 263 students of SMP Muhammadiyah Pakem. The reliability test was calculated with the help of SPSS for windows version 22.0 and obtained an alpha value of 0.776, as shown in the following table:

Table 2. Reliability Statistics

Cronbach's Alpha	N of Items
.776	29

An instrument is reliable or consistent if Cronbach's Alpha value is > 0.60. This indicates that the career maturity scale instrument developed is eligible to measure the level of career maturity in students of SMP Muhammadiyah Pakem.

Referring to the results of these calculations, it can be said that the instrument can be used to measure the career maturity of SMP Muhammadiyah Pakem students because the distribution of items can represent the aspects that have been determined.

Final

Compilation The final compilation is the researcher's step to combine the grid, the item scale statement items, and the scoring method of interpreting the anti-bullying awareness scale instrument into a complete set of agents ready to use. This toolkit is also equipped with guidelines for the use of tools such as the following:

1. Introduction, this career maturity scale instrument was created to obtain information related to the career maturity level of students of SMP Muhammadiyah Pakem. The development of this instrument is expected to make a scientific contribution to the development of guidance and counselling services in the career field.

2. Instructions for filling

   a. Students are directed to fill in their identity (name, absence and class number).
   b. Students are required to read the filing instructions carefully.
   c. Categorization of the results of filling out the instrument

1) The career maturity scale instrument consists of 29 statement items, and on each item, there are four alternative answers. Then the assessment of each selected answer is as follows:

Table 3. Career Maturity Scale

No	Alternative Response	Score
1	Very Appropriate	4
2	Appropriate	3
3	Not Appropriate	2
4	Strongly Disagree	1

Thus, the lowest score to be obtained is 29 x 1 = 29, and the highest score is 4 x 29 = 116.

2) Values interval score is calculated by the formula of Azwar (2016) as in the table below:

Table 4. Interval

No.	interval	Category
1	M + 1.5 S <X	Very high
2	M + 0.5 S <X ≤ M + 1.5 S	High
3	M - 0.5 S < X M + 0.5 S	Enough
4	M - 1.5 S < X M - 0.5 S	Low
5	X M - 1.5 S	Very Low

Description:

M = mean (mean)
X = score
S = standard deviation

Calculating Mean = (highest score + lowest score)

= (116 + 29)
= 72.5

Calculating standard deviation = 1/6 (highest score - lowest value)

= 1/6 (116 – 29)
= 14.5

Referring to the calculation, the interval scores obtained are:

Table 5. Score Interval

No	Interval	Category
1	94.25 < X	Very high
2	79.75 < X 94.25	High
3	65 ,25 < X 79.75	Enough
4	50.75 < X 65.25	Low
5	X 50.75	Very Low

Interval The l is used to determine the position of the total score of each subject against the appropriate career maturity category.

Discussion

Presentation of the study results shows that the career maturity scale instrument developed can be used to measure the career maturity of the students of SMP Muhammadiyah Pakem because it has been proven to be valid and reliable. Several calculations of field test data carried out with the help of SPSS for windows version 22.0 is KMO, Barlett's test, anti-image correlation, commonality test, total variance explains, eigenvalues, and reliability tests. The validity test uses SPSS for windows version 22.0 but uses Ms Excel 2019. The validity test was carried out by five people and determined that the item would pass the validity test if it had a final score of more than or equal to 0.87. Simultaneously with the validity test, a language test was also carried out to make the sentences of the questions effective. The results of field trials on 263 students of SMP Muhammadiyah Pakem found that the sampling in the study was declared appropriate because it had a KMO of 0.684. Each item in the career maturity scale instrument is independent of the other because Barlett's Test is worth 0.00.

Referring to the anti-image correlation and commonality test results, the anti-bullying awareness scale finally consisted of 29 favourable and unfavourable items. The items are formed from five aspects, namely: 1) Having a clear orientation towards career choice; 2) Ability to determine the information and planning 3) Ability to determine the consistency of vocational preferences; 4) Able to crystallize career choice in character; 5) The ability to make decisions by the wisdom of vocational preferences. After calculating the total explained variance and eigenvalues, the five aspects that initially brought 18 factors/indicators left only 11 factors/indicators. The eleven factors/indicators are being able to understand the importance of having aspirations in a career, having knowledge of various career supporting factors, having aspirations in a career according to their interests and talents, having clear goals about the success of their career choice, being able to plan a career by ideals, able to communicate career planning with others, able to collect various information that supports the world of his career, have a strong reason for the choice of majors taken, able to adhere to the principles of the career choices taken, have a great interest in career choices, have values that are firmly held as the basis for career choices. The last test carried out to develop this career maturity scale instrument is the reliability test. The calculation on SPSS for windows version 22.0 shows an alpha value of 0.776 which means that the career maturity scale instrument is consistent because the alpha value obtained is more significant than 0.6.

The stages used in this study have similarities with development research conducted by Jayanti (2013). The instrument developed by Jayanti is an inventory of work readiness for students of the Marketing Department at SMK Negeri 1 Depok. Jayanti also uses stages that refer to the opinion of Saifuddin Azwar. The difference highlighted is that Jayanti's research followed all steps by location until a good instrument was finally obtained. While in the study on the development of this career maturity instrument, the researcher summarized several stages, such as the field test stage and item selection which were combined in the field trial stage. In addition, the researcher also eliminated the construct validation stage and replaced it with a content validation stage which involved experts in the item review process with the consideration that the career maturity scale instrument was still used in a limited way. Content validation is carried out simultaneously with the item writing stage.

Another research that also uses the stages of instrument development according to Saifuddin Azwar is Rahmawati (2018). This study aims to develop an inventory of anti-bullying awareness among high school students in the DI Yogyakarta, Central Java, West Java, and Jakarta provinces. The development carried out by Rahmawati, and the development of the career maturity scale instrument have similarities where both use a Likert scale with four alternative answers, namely Very Appropriate (SS), Appropriate (S), Not Appropriate (TS), and Very Unsuitable (STS). The statement items in this study consisted of favourable and unfavourable choices, in contrast to Rahmawati, who made statement items with only good decisions. Rahmawati also involved expert judgment invalidating inventory.

Conclusion

The scale instrument developed by the researcher can reveal career maturity in students of SMP Muhammadiyah Pakem with reliability of 0.776 and content validation by experts of 0.87. This is also based on the results, which state that the KMO value is 0.684 and Barlett's Test is 0.00. Then the arrangement of items becomes more straightforward with a total of 29 items after calculating the anti-image and communality tests. In addition, the total diversity that can be explained by the variety of factors formed in the career maturity scale is 63.346%. When compared with research that has been done previously, the development of a career maturity scale that will be applied to students of SMP Muhammadiyah Pakem has advantages and disadvantages in several respects but can still be used because it has been proven valid and reliable.

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