Construction of Student's Career Maturity Scale

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ABSTRACT

To be able to choose and plan the right career, is needed including knowing one's own condition, knowledge about work, the ability to choose a job, and the ability to plan steps towards the expected career. This study aims to develop measuring instruments that can measure career maturity in students. The Student Career Maturity Scale consists of 40 items that measure 6 aspects of Student Career Maturity. A total of 325 students participated in this study. The validity of the measuring instrument was tested by content validity with 4 raters. Through reliability analysis with Cronbach's Alpha formula, this measuring instrument has a reliability coefficient of 0.919 and a Standard Error of Measurement of 0.137. These results indicate that this Student's career maturity scale can be used to measure career maturity in college students because this measurement tool is proven to have good psychometric properties.

Keywords: Career Maturity ; Measuring Tool; Students

INTRODUCTION

Career is one of the most important things in human life. Career is a series of continuous work activities and involves choices from various opportunities. One's career development can be seen in various ways, one of which is by looking at the maturity of the individual's career. Super (Leovani, 2017)states that career maturity is individual readiness to face the tasks of career development. Levinson (Toomey et al., 2009), stated that "Career maturity represents the extent to which one has gained the necessary knowledge and skills to make realistic career decisions".

Joseph (2002) suggests that there are several stages to achieve career success. These stages are recognizing self-potential, job characteristics, internal environment, and external environment. Self-potential recognition is very important because self-potential recognition is the basis of all stages of achieving career success. Self-potential recognition can be done during education. through education, individuals can develop their values, knowledge, and skills in preparation for continuing life and entering the world of work.

Students ideally enter an exploratory phase, and focus on classifying what they are doing. Also, students in general must be able to do the division of time, as the initial foundation before entering the world of work. On average, students do this by working part time, which does not burden their study time on campus. This activity aims to be the first step in their observation to have a picture of the future in their respective career worlds.

Before being able to choose a career, students need to know what a career is and what needs to be considered in choosing a career. This was confirmed by Porfeli & Savickas, (2012) that career planning is part of life planning. There are several theories that discuss a person's career choice, one of

which is career maturity, to be able to choose and plan the right career, career maturity is needed, namely knowledge of one's own abilities, knowledge of work, the ability to choose a job, and the ability to plan steps towards the expected career.

The preparation of a career scale has been discussed in previous studies (Savickas et al., 2018) compiling a Student Career Construction Inventory (SCCI) accompanied by the construct and criterion validity evidence for using the SCCI for students, university students and students who have graduated. The result of compiling this scale is, The three age groups displayed mean differences on the variables, with older groups having higher mean scores as expected, which prevented the SCCI from exhibiting scalar invariance.

In addition, research on the preparation of career scales has also discussed career adaptation scales (Chan et al., 2015; Porfeli & Savickas, 2012), and career orientation (Wong, 2002). With reference to the explanation above, this research is focused on compiling scales related to career maturity in students, valid scales can be used as measuring instruments related to related themes. It is hoped that a good scale with good psychometric properties can produce good research too.

METHOD

Variables and Operational Definitions

The scale compiled in this study is the Career Maturity Scale. Career maturity is an individual's readiness to make career decisions that are in accordance with one's will and personality tendencies and the stage of career development.

Respondents

The sample of this research was 325 Indonesian students from various universities. The sampling technique in this study was convenience sampling, with the criteria being male and female students who were willing to be respondents in the study.

Career Maturity Scale

Measuring tools are arranged in the form of a questionnaire. This questionnaire was compiled in the form of a Google Form and distributed via various social media, such as WhatsApp, Instagram, and Facebook to Indonesian students from various universities. The Career Maturity Measurement Tool for Students was compiled with 40 items of favorable and unfavorable statements and 4 categories of answers, consisting of Very Unsuitable (STS), Unsuitable (TS), Appropriate (S), and Very Appropriate (SS). This measurement tool measures 6 aspects of career maturity. The 6 aspects contained in career maturity according to Donald E Super include: 1) Career Planning, 2) Career Exploration, 3) Making career decisions (Decision Making), 4) Knowledge about making career decisions (World of work information),

Table 1
***Blueprints* Career Maturity Measuring Tool for Students**

Aspect	Indicator	Amount
Career Planning (Career *Planning*)	Study career information	3
	Take additional education	3

	Know the job description at want	3
Career Exploration (Career *exploration)*	Dig And look for information careers from various sources, Know their own potential	2
	Have career information	3
Making career decisions (Decision Making)	Know your interests and abilities,	3
	Use ability, self in making career decisions	3
Knowledge of making career decisions (World of work *information*)	Know method person other study his job	3
	Know task from a number of work	3
	Know condition For enter a job	3
The preferred working group (knowledge of preferred *occupational group*).	Understand task from workw hich are desired	3
	Know the tools you need with the career you want	3
Realism of career decisions (Realism)	Know strength And Weaknesses related to the desired career	2
	Capable see factor Which support and hinder careers	3
	Total	40

Data analysis technique

The readability test was conducted on 10 students to ascertain whether the language used in compiling the items could be understood by the respondents. Reliability estimation is done through Cronbach's alpha reliability coefficient (insert theory alpha cronbach) and calculations performed using aiteman. Cronbach's Alpha is a calculation formula that is applied to reveal the level of reliability of a measuring instrument. In this system, if the reliability calculation results reach 0.6 or more, then the measuring instrument can be said to be reliable. Therefore, the result that the researcher obtained from

the calculation of this measuring instrument is 0.919 and has exceeded the minimum reliable limit on Chronbach's Alpha.

Validity is a measure that shows the level of validity of a test or measuring instrument. Validity in the development of measuring instruments is used to find out how precisely the measuring instrument is in measuring what is to be measured. A measuring instrument can be said to be valid if it can show data from variables correctly and does not deviate from the actual situation. There are several things that can affect the validity of the measuring instrument, namely the user of the measuring instrument and the subject being measured. The validity of measuring instruments can be proven or tested with content or content validity, construct validity, and criterion validity. The validity test used in this study is content validity, which is a validity that tests the elements of the measuring instrument and is then processed by rational analysis.

Content validity testing is carried out by raters who have certain criteria such as having at least completed higher education at the Faculty of Psychology, are independent and have experience doing research as suggested byAiken, (1985). Furthermore, content validity was tested using the Aiken's V formula. With 4 raters, the minimum V index set was 0.71 with right-tail probabilities p=0.01 (Aiken, 1985). The data source for content validity testing comes from raters. Categorization and interpretation of scores is done using a hypothetical categorization based on the normal distribution. The categorization of scores in this study is based on the categorization of scores proposed by Azwar (2012).

RESULT

The total number of subjects is 325 Indonesian students. There are also some respondents who study in Türkiye. The origin of the study program of the existing respondents The majority of male respondents came from the Faculty of Psychology.

Table. 2

Data from Respondents' Universities

Universities	Amount
Stai Balikpapan	16
Universitas Mulawarman	116
Universitas Muhammadiyah Kalimantan Timur	25
Universitas Indonesia	18
Univesitas Terbuka	9
Universitas Tri Dharma Balikpapan	24
Insitut Teknologi Kalimantan	5
Universitas Tujuh Belas Agustus	24
Istanbul University	1
Universitas Telkom	1
Institut Teknologi Bandung	1
Universitas Gajah Mada	2
Universitas Brawijaya	37
Sekolah Tinggi Migas	2
Universitas Kutai Kertanegara	1
Widya Gama	1
Uin Sultan Aji Muhammad Idris	4
Institut Seni Indonesia Yogyakarta	1
Universitas Muhammadiyah Surakarta	2

Ars University Bandung	1
Universitas Muslim Indonesia	1
Universitas Katolik Indonesia Atma Jaya	1
Politektik Balikpapan	1
Universitas Negeri Yogyakarta	1
Istanbul Sabahattin Zaim University	1
Ibrahim Cecen Universitesi	1
Universitas Balikpapan	1
Universitas Kristen Petra	1
Universitas Jember	1
Universitas Wijaya Kusuma Surabaya	1
Politenik Kesehatan Kementrian Kesehatan Kalimantan Timur	2
Universitas Surabaya	1
Universitas Sanata Dharma	1
Universitas Multimedia Nusantara	1
Does Not Mention Name University	19
Total	**325**

Table 3.
Data Origin of Respondent's Study Program

Study program	Amount
Agribusiness	1
Accountancy	2
Guidance and counseling	2
Biology	2
Digital Business	4
business	1
Visual communication design	1
Economy	2
Sharia Economics	1
Pharmacy	3
nutrition	1
International Relations	2
Law	46
Divine	1
Informatics	1
Medical	41
Veterinary Medicine	1
Communication	1
Management	4
Management of Islamic Education	1
Mathematics	10
Government	2
Music Creation	1

Islamic education	2
Early childhood education programs	1
English language education	3
Dentist Education	1
primary teacher education	2
Sports Education	6
History Education	1
Syariah banking	1
petroleum	2
Library And Information Science	1
Psychology	148
Literature	1
Heavy Equipment Engineering	1
Electrical engineering	1
Informatics Engineering	1
Mechanical Engineering	1
Medical Laboratory Technology	1
Multimedia Engineering Technology	1
Does Not Mention Study Program	19
Total	**325**

Based on the results of the readability test on 10 students, it is known that the sentences used in the Student Career Maturity Scale are quite understandable and there are no sentences that contain bias or seem ambiguous. The results of the content validity test tested on 4 raters had the lowest Aiken's V index in this measuring instrument item of 0.42 with an average Aiken's V index of 0.92. Thus, this Career Maturity Measurement Tool has relevance between constructs and good items.

In addition to validity testing, reliability testing is also needed to find out how well a research measuring tool is. Reliability is a way to find out how far this measuring instrument can be trusted in the research process. The measuring instrument itself can be said to be reliable when the data obtained from the measuring instrument can be trusted. Just like validity, the user of the measuring instrument and the subject being measured are factors that can affect the reliability of a measuring instrument. Therefore, even though a measuring tool has proven its validity and reliability, the measuring tool needs to be tested first. There are several reliability tests that can be used on measuring instruments including test-retest, equivalent, and internal consistency. The result of the calculation of the Standard Error of Measurement (SEM) is 0.139.

Below is the categorization of career maturity: Career Maturity Categorization

- Average mortgage

  $\mu = ½$ (Lowest score + Highest score) × Number of Items

  $= ½ (1 + 4) \times 40$

  $= ½ . 5 \times 40$

  $= 100$

- Empirical mean

  $= 2.82$

- Max Score

  = Number of items × highest score

  $= 40 \times 4$

  $= 160$

- Minimum Score
  = Number of items × lowest score
  = 40×1
  = 40
- Score range
  = maximum score - minimum score
  = 160 – 40
  = 120
- Standard Deviation
  = Score Range/6
  =120/6
  = 20

1. RH – (3 X standard deviation) RH – (1.5 X standard deviation)
   = 100 – (3 X 32) = 100 – (1.5 X 32)
   = 100 – 96 = 100 – 52
   = 4 = 48 (very low)

2. RH – (1.5 X standard deviation) RH – (0.5 X standard deviation)
   = 100 – (1.5 X 32) = 100 – (0.5 X 32)
   = 100 – 48 = 100 – 16
   = 52 = 84 (very low)

3. RH – (0.5 X standard deviation) RH+ (0.5 X standard deviation)
   = 100 – (0.5 X 32) = 100+(0.5 X 32)
   = 100 – 16 = 100+16
   = 84 = 116 (low)

4. RH + (0.5 X standard deviation) RH+ (1.5 X standard deviation
   = 100 + (0.5 X 32) = 100+ (1.5 X 32)
   = 100 + 16 = 100+48
   = 116 = 148 (medium)

5. RH + (1.5 X standard deviation) RH+ (3 X standard deviation)
   = 100 + (1.5 X 32) = 100+ (3 X 32)
   = 100 + 48 = 100+96
   = 148 = 196 (height)

DISCUSSION

The purpose of this research is to compile a career maturity measuring instrument for students. From the results of the study found, it is proven that the Career Maturity Measurement Tool for College Students has quite good psychometric properties. This measuring instrument has a high reliability coefficient with a score of 0.919, besides that, this measuring instrument also has good validity. There are 3 stages carried out in the process of preparing this measuring instrument, including:

1) Drafting concept.

In the stages of developing this concept it was found that this measuring instrument was needed to measure and determine career maturity by active students from various tertiary institutions. In addition, normative definitions and operational definitions are also prepared at this stage. At this stage it also determines the criteria for respondents or subjects and questionnaires as a format for measuring career maturity in students.

2) Preparation of measuring instrument constructs.

The construct of the measuring instrument is prepared based on the definitions and theories from experts, as well as the normative and operational definitions that have been prepared in the previous stages. The constructs prepared at this stage include aspects, indicators, and statement items that will be used in measuring instruments. There are 6 aspects in the Career Maturity Measuring Tool for Students, including Career Planning, Career Exploration, Making career decisions (Decision Making), Knowledge about making career decisions (World of work information), Preferable Work Groups (knowledge of preferred occupational group), Realism of career decisions (Realism)

3) Tryouts

This stage is carried out to measure and determine the validity and reliability of the measuring instruments that have been prepared. The trial was carried out by distributing measuring instruments in the form of questionnaires. The questionnaire was compiled in the form of a Google Form which was shared via various social media, such as WhatsApp, Instagram and Facebook.

From the validity test that has been carried out on the items that have been compiled, it can be seen that there are 21 valid items then there are 19 moderately valid items. In addition, from the results of the reliability test it was also known that there were 5 items that were dropped out of all 45 items. This makes only 40 items that can be used in this Career Maturity Measurement Tool for Students. With the data analysis that has been done, a reliability value of 0.921 is obtained. So, from the results of this reliability it can be seen that this measuring instrument can be trusted and is used to measure career maturity in students

All 40 items in this measuring instrument have a total item correlation above 0.3. This measuring instrument has a reliability coefficient of 0.919 and a Standard Error of Measurement of 0.137. From the results of the reliability coefficient, it can be interpreted that the measuring instruments that have been compiled can be trusted to be used in the research process. In addition, the Career Maturity Measurement Tool for Students also has satisfactory content validity and construct validity. With satisfactory validity results, this measuring instrument is certain to be able to measure career maturity in students obtained by students.

In the process of preparing the measuring instrument, researchers measured 6 aspects of career maturity in students. The 5 aspects contained in Career Maturity in Students according to Donald E Super include: 1) Career Planning, 2) Career Exploration, 3) Making career decisions (Decision Making), 4) Knowledge of making career decisions (World of work information), 5) Preferred Work Groups (knowledge of preferred occupational group), 6) Realism of career decisions (Realism)

In the end, this study produced output in the form of a Career Maturity measuring instrument for students which has satisfactory validity and reliability, so that it can be used to map career maturity

for students. With this measurement tool, it is hoped that research on career maturity in students, especially in the student population, can develop better because it uses measuring tools that are prepared through standard procedures with satisfactory psychometric properties.

Career Maturity Measuring Instruments for Students that have been compiled show good psychometric property results. This is evidenced by the satisfactory results of the validity test and reliability test. With good psychometric properties, this measuring instrument can be used to measure career maturity in college students. In addition, this measuring instrument can also be used in the process of research or development of science. Career Maturity Measuring Instruments for Students can be useful for both students and academics. For students, this measurement tool can be used to map the conditions of career maturity in students for certain purposes. Meanwhile, for academics who are interested in conducting research related to career maturity in students, this measuring instrument can be used as a measuring tool. From the research and preparation of measuring instruments that had been carried out, the research team realized that there was many flaws. Therefore, it is hoped that other academics can perfect the Career Maturity Measurement Tool for Students so that knowledge in the field of psychology can continue to develop. The indicators and items compiled may still be limited. So the next researcher is recommended to add indicators and items that make it possible to measure career maturity in students. Another recommendation is to conduct research and prepare measuring instruments by selecting subjects or respondents from high school/equivalent fresh graduates.

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