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Development of Verbal Creativity Test Based on Creative Industry Sectors

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ABSTRACT

This study aims to assess the validity and reliability of the verbal creativity test developed in order to identify the creative potential of prospective public relations practitioners who will be tasked with developing and promoting Indonesia's creative industries. The test developed was named VCT - ICI, which is an abbreviation for Verbal Creativity Test - Indonesian Creative Industries (*Tes Kreativitas Verbal - Industri Kreatif Indonesia*). This test was structured based on 16 subsectors of Indonesia's creative industries, which were used as a stimulus in designing test items. The respondents in this study were 201 students majoring in public relations of the faculty of communication sciences from three Indonesia's universities. Data analysis was carried out to assess the validity and reliability of the verbal creativity test developed. Further analysis produces norms (standard scores) for interpreting the verbal creativity measurement results.

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I. INTRODUCTION

Currently, Indonesia's government is still trying to develop national creative industries. The contributions of creative industries include providing employment opportunities, increasing national competitiveness, establishing a positive business climate, and improving national economic growth (Lumanauw, 2016; Global Indonesian Voices, 2014). However, as a driver of economic growth, the contribution of creative industries to Indonesia's gross domestic product (GDP) is still lower than those of several countries. In 2015, the contribution of creative industries to Indonesia's GDP was 7%. This value was lower than those of the United States (11.12%), Thailand (9.5%), and South Korea (8.67%). Even in 2017, the contribution of Indonesia's creative industries was still at 7.38% precisely (Hamdani, 2016; Rahayu, 2017).

One method for developing creative industries is by optimizing the role of communication and promotion. This ability is especially demanded from students or graduates of the faculty of communication sciences as public relations practitioners. Moreover, a proper marketing strategy is needed so that the outcomes of creative industries are known widely, enabling them to compete within today's economic landscape (Kurniawan, 2016). In this regard, public relations practitioners are expected to produce publicity that could shape and improve the positive images of creative industries.

One main ability that public relations practitioners need to possess in conducting communication and promotion is creativity (Ardianto, 2014). Prior results showed that 70.2% of clients demand high creativity from public relations agency staff (Sudhaman, 2015). With creativity, public relations practitioners are able to produce advertorial messages that stand out and attractive as well as have emotional and intellectual impacts (Black, 2014). Advertorial, a form of promotional writing commonly created using a news style, aims to generate a positive image and public encouragement for an industry's products and/or services so that it could facilitate the industry to achieve its marketing goals (Sopian, 2016).

Therefore, public relations practitioners need to possess creativity in language, or known as verbal creativity. It is defined as the ability to form words skillfully as a result of cognitive activities, which allows individuals to express various ideas (Handayani, 2009). Creativity is arguably the most important element in advertising success (El-Murad & West, 2004). In today's world saturated with advertisements, creative ads stand out and grab the audiences' attention, which is the first step in conveying the industry's message. Various messages are formulated, designed, and delivered through words or sentences, all of which require verbal creativity.

To identify the verbal creativity abilities possessed by prospective public relations practitioners, a test in the form of creativity measuring tool is needed to identify or predict the abilities. To ensure whether the test is suitable to predict the measured aspects, it is necessary to review it based on the psychometric properties of the creativity measuring tool (Eysenck, 1994).

Creativity test can be used to identify an individual's creative potential. This test identifies four creativity abilities: (a) fluency, namely the ability to generate many relevant ideas; (b) flexibility, namely the ability to produce diverse ideas; (c) elaboration, namely the ability to develop ideas; and (d) originality, namely the ability to produce unique ideas (Munandar, 2012). Among these four, fluency is considered the most basic aspect of individual creativity (Clark & Mirels, 1970).

Currently, there are three commonly used verbal creativity measuring tools. The first is the Torrance Test of Creative Thinking - Verbal (TTCT - Verbal). This test, constructed by Torrance in 1966, consists of six subtests: (a) asking questions, (b) guessing causes, (c) guessing consequences, (d) product improvement, (e) unusual uses, and (f) just suppose. These subtests measure three aspects of creativity: fluency, flexibility, and originality (Gregory, 2013).

The second is the Verbal Creativity Test (VCT) or *Tes Kreativitas Verbal* (Munandar, 1977; Munandar, 2012). This test consists of six subtests: (a) beginning words, (b) composing words, (c) forming three-word sentences, (d) similar properties, (e) various uses, and (f) what are the consequences. These subtests measure four aspects of creativity: fluency, flexibility, originality, and elaboration (Munandar, 1977, Munandar, 2012). The third is the Verbal Creativity Test "c" (VCT "c"), which was created for students majoring in advertising. This test consists of words starting with the letter "c" as the test items. Likewise, the aspects of creativity measured in this test are fluency, flexibility, originality, and elaboration (Kartana et al., 2019).

Nonetheless, these three verbal creativity measuring tools exhibit two main drawbacks. Firstly, the various stimuli used (Gregory, 2013; Kartana et al., 2019; Munandar, 1977) are general

in nature, not specifically sourced from simulations related to public relations practitioner as a profession. As a consequence, the findings of the measurement and/or examination process are still general in nature and not yet contextual, especially regarding the potential abilities or creativity needed to communicate and promote the products and/or services of creative industries. Thus, it is necessary to develop a verbal creativity test that contains stimuli related specifically to creative industries so that the findings obtained could reflect the ability of prospective public relations practitioners in communicating the image of products and/or services of creative industries.

Secondly, these three verbal creativity measuring tools do not provide norms/standards assessment (Gregory, 2013; Kartana et al., 2019; Munandar, 1977), which are relevant for use by public relations practitioners. Norms/standards are needed in this case to determine an individual's position compared to those of others (Cohen et al., 2018). Hence, norms/standards for verbal creativity measuring tool is particularly necessary for public relations practitioners.

Thus, based on the above background, also taking into account the limitations of the existing verbal creativity tests (Gregory, 2013; Kartana et al., 2019; Munandar, 1977), this study propose a verbal creativity test consisting of items that could measure verbal creativity related to the need for communicating and promoting the products and/or services of Indonesia's creative industries. The verbal creativity test developed was named Verbal Creativity Test - Indonesian Creative Industries (VCT - ICI) or *Tes Kreativitas Verbal - Industri Kreatif Indonesia*. Based on the test design, this study assesses its validity (content validity, construct validity, and criterion validity), and reliability, as well as produce a VCT - ICI measurement norms, which could be used to interpret the verbal creativity measurement results, thereby serving as the standards for public relations practitioners.

II. ANALYTICAL FRAMEWORK

A. Verbal Creativity

Creativity is defined as an individual's ability to think divergently, which allows his/her to produce various responses to a question (Guilford, 1973). Creativity can also be defined as the ability to create something new, the ability to produce new ideas as solutions to problem being faced, and the ability to see new relationships based on the existing elements (Munandar, 2012).

According to Sternberg (2012), creativity is a typical meeting point of three psychological attributes, namely intelligence, cognitive style, and personality. Intelligence comprises the ability to formulate problems, strategic skills, decision making skills, etc. Cognitive style refers to the ability of creative individuals to break away from conventional things. Personality refers to creative personal characteristics, such as exhibiting tolerance towards ambiguous things, being tenacious in facing obstacles, etc.

Creativity itself is divided into several types, one of which is the one that emphasizes the ability to produce words within certain time limits, where each word contains certain letters. This creativity is also known as verbal creativity (Wijayanti, quoted in Handayani, 2009). It is defined as the ability to form words skillfully as a result of cognitive activities, which allows individuals to express various ideas (Handayani, 2009). It can also be defined as the ability to form new ideas or notions as well as to combine these ideas into something new, which reflects fluency, flexibility, and originality in the form of verbally expressed divergent thinking (Maulud, quoted from Puspitacandri, 2013).

B. Aspects of Creativity

There are four aspects of creativity (Torrance in Govindasamy et al., 2024; Wechsler et al. 2022), namely fluency, flexibility, elaboration, and originality.

Firstly, fluency is defined as the ability to produce many relevant ideas as well as to produce various solutions to solve a problem being faced. Following, flexibility is defined as the ability to produce diverse ideas or to break away from the existing habits and conventional things. Flexibility is also related to the ability to see a situation from various perspectives (Puccio et al., 2010). Next, elaboration is defined as the ability to develop, deepen, and enrich an idea. Elaboration also refers to the ability to generate more detailed ideas or solutions to a problem being faced. Finally, originality is defined as the ability to produce ideas that are unusual, unique, and rarely thought or generated by the majority of people (Torrance in Govindasamy et al., 2024; Wechsler et al. 2022).

C. Design of VCT - ICI

VCT - ICI developed in this study measures four aspects of creativity: (a) fluency, namely the ability to produce many relevant ideas; (b) flexibility, namely the ability to produce diverse ideas; (c) elaboration, namely the ability to

develop ideas; and (d) originality, namely the ability to produce unique ideas (Munandar, 2012).

In the fluency aspect, the more phrases respondents produce during this test, the higher the fluency score given; conversely, the fewer phrases they produce, the lower the fluency score given. In the flexibility aspect, the fewer repetitions of words they produce to make phrases, the more positive the flexibility score given; vice versa, the more repetitions of words they produce to make phrases, the more negative the flexibility score given. In the elaboration aspect, the more words they use to make phrases, the higher the elaboration score given; on the other hand, the fewer words they use to make phrases, the lower the elaboration score given. In the originality aspect, the more unique the words they use to create phrases, the higher the originality score given; on the contrary, the more common the words they use to create phrases, the lower the originality score given.

In VCT - ICI, the items are arranged based on the types of Indonesia's creative industries. Creative industries are industries that heavily harness individuals' creativity, skills, and talents, showing high potential for creating wealth and job opportunities through the generation and exploitation of intellectual property and content (UK DCMS Task Force, quoted from Setiawan, 2012). Creative industries are also defined as the industries that are based on—and originate from—the utilization of individuals' creativity, skills, and talents to create prosperity and employment opportunities through the creation and utilization of the individual's creativity and inventiveness (Indonesian Ministry of Trade, quoted from Setiawan, 2012).

VCT - ICI in this study is structured based on 16 subsectors of Indonesia's creative industries: (a) crafts/handicrafts; (b) culinary/food; (c) performing arts; (d) fine arts; (e) product design; (f) visual communication design/graphic design, (g) software/game application; (h) films, animations, and videos; (i) architecture, (j) interior design; (k) publishing (books/magazines/newspaper); (l) television and radio; (m) advertising; (n) fashion; (o) photography; and (p) music (Indonesia's Creative Economy Agency, 2017).

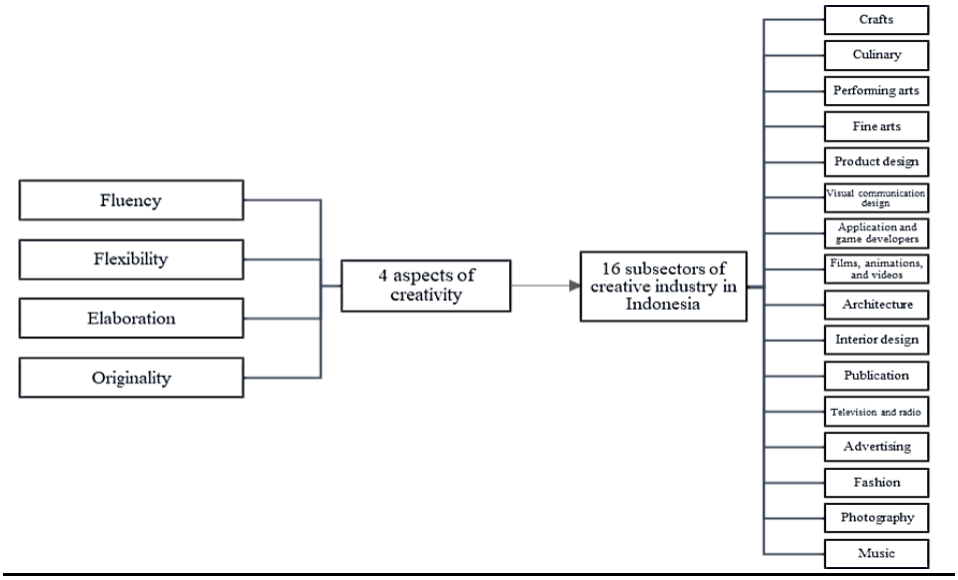

Figure 1. VCT - ICI Structure

D. Criterion Validity of VCT - ICI

Criterion validity is a validity that is assessed by comparing the scores obtained from a test with those of other tests measuring similar variables. In this case, the scores obtained from other tests act as criteria. In this study, criterion validity of VCT - ICI is assessed, meaning that its validity is assessed by correlating the scores with those of obtained at different occasions (Cohen et al., 2018). The criterion score used in this study is respondents' GPA, based on Freund and Holling (2008)'s findings, which stated that creativity can predict GPA.

The four aspects of creativity are assumed to be related to GPA. The fluency aspect refers to how many ideas or thoughts an individual can produce in a work that supports his/her academic achievement. The flexibility aspect refers to how many ideas or thoughts are different or varied, not repeated in the work produced.

The elaboration aspect refers to how much an idea or thought can be developed so that it generates a work that is comprehensive, clear enough, and understandable by other individuals. The originality aspect refers to how much a new idea or thought is different from the existing ideas so that it generates a work that is unique, interesting, and noteworthy.

When individuals or students possess fluency, flexibility, elaboration, and originality, they would be more productive, adaptive to diverse perspectives, comprehensive, and unique in producing academic work so that they acquire a high GPA. Thus, if a respondent produce a high verbal creativity score, then he/she should have been good in terms of academic achievement (as a student majoring in public relations).

Based on this theoretical reasoning, the first hypothesis is proposed as follows:

H1: There is a positive correlation between verbal creativity measurement and academic achievement. The higher the verbal creativity score, the higher the academic performance.

E. Construct Validity of VCT - ICI

Construct validity in this study refers to the extent to which the constructs in VCT - ICI reflect the theoretical construct underlying the test design. There are two ways to assess construct validity. The first is by assessing the homogeneity of constructs. If they are homogeneous in measuring one underlying construct, then the test is stated to has construct validity. The second is via factor analysis. It is a term used in mathematical procedures designed to identify specific factors or variables, such as attributes, characteristics, or dimensions, that vary among people. The homogeneity of evidence is assessed using confirmatory factor analysis (CFA), where the extent to which a hypothetical model matches the actual data is tested (Cohen et al., 2018). If the construct being examined shows a fit model (based on goodness of fit's indicators), then VCT - ICI is stated to has construct validity (homogeneity of evidence). Thus, based on this theoretical reasoning, the second hypothesis is proposed as follows:

H2: The four aspects of creativity (fluency, flexibility, elaboration, and originality) demonstrate a fit model (based on goodness of fit's indicators).

F. Reliability of VCT - ICI

This study assess the internal consistency of VCT - ICI by means of split-half reliability. It is an estimate of the consistency of a test by correlating the scores obtained from examining two equivalent parts. In this case, the question items contained in the test are divided into two groups, where each group is administered to the same subject. The scores obtained are then correlated (Cohen et al., 2018; Gregory, 2013). In VCT - ICI, after the items are administered to a number of respondents, they are divided into two groups: even-numbered and odd-numbered items. The scoring results from each group are then correlated. If the correlation results show a significant relationship, then VCT - ICI is stated to has internal consistency. On the other hand, if the results show no significant relationship, then VCT - ICI is stated to has no internal consistency.

Based on this theoretical reasoning, the third hypothesis is proposed as follows:

H3: There is a positive correlation between the creativity measurement scores in even-numbered items and those of odd-numbered items.

III. METHODOLOGY

A. Respondents

The 201 respondents in this study were students majoring in Public Relations study program, Faculty of Communication Sciences, X University (37 people or 18.4% of total respondents), Y University (88 people or 43.8%), and Z University (76 people or 37.8%). A significant proportion of them were in their sixth semester (57.7%), female (55.7%), aged 19–25 years old (M = 20.56; SD = 0.937), and had a GPA above 3.00 (87.6%). GPA measurements were based on self-report inquired in the control data/respondent identity data. All respondents were given an informed consent form and agreed to participate in this study.

B. Materials

The main instrument used in this study was the Verbal Creativity Test - Indonesian Creative Industries (VCT - ICI). This test was created in Microsoft PowerPoint and displayed using a projector screen. This test consisted of four sections: (a) work instructions, (b) additional instructions, (c) example of questions and wrong and right answers, and (d) 16 question items.

The first section was work instructions. Following are the description of VCT - ICI instructions: (a) in this test, there are 16 question items comprising several words; (b) write a phrase based on the words displayed on the screen; (c) 1 phrase consists of 1 to 7 words; (d) the phrase is intended

to build a positive image or impression of the words given; (e) while time is available, please create as many phrases as possible; (f) when you hear the timer sounds, it means the time for working on a particular item has run out; please continue to the next item or page. The rule that 1 phrase comprise 1 to 7 words was based on Miller's theory (cited in Pastorino & Doyle-Portillo, 2012), which stated that short-term memory is able to remember up to 7 ± 2 items. This is related to the purpose of creating phrases to be used in public relations media, such as advertorials, which are expected to be immediately remembered by individuals who read them.

The second section was additional instructions. In this section, respondents were given an explanation that (a) a phrase is not an example of the given word; (b) a phrase is not the name of a specific product or brand; (c) a phrase is not the name of an institution or agency; (d) a phrase is not the name of a person or figure; and (e) a phrase is not the title of any book, article, music, film, etc.

The third section was example of questions and wrong and right answers. An example of a question given in this test was the word "education". Based on this word, the example of both wrong and correct answers were produced, as shown in Table 1 and 2.

Tabel 1. Example of wrong answers

No	Answer
1	1. Civic education 2. ITB is an excellent university 3. Ki Hajar Dewantara contributed to advancing the world of education 4. Rainbow Troops

Tabel 2. Example of correct answers

No	Answer
1	1. Excellent 2. Teaches morals and ethics 3. Build the character of Indonesian children 4. High quality 5. International standard 6. There are skilled and effective teachers 7. Has an excellent and a high quality curriculum 8. There are accredited schools

Finally, the fourth section was 16 question items. These items were arranged in accordance with subsectors of Indonesia's creative industries, namely (a) crafts/handicrafts; (b) culinary/food; (c) performing arts; (d) fine arts; (e) product design; (f) visual communication design/graphic design; (g) software/game applications; (h) films, animations and videos; (i) architecture; (j) interior design; (k) publishing (books/newspapers/magazines); (l) television and radio; (m) advertising; (n) fashion; (o) photography; and (p) music. The processing duration given for each item was 2 minutes. In working on this test, respondents were asked to write their answers on the answer sheet. An example of an answer sheet is shown in Table 3.

Tabel 3. Sample of answer sheet

No	Answer
1	1. 2. 3.

C. Procedure

In developing VCT - ICI, 10 procedures were carried out: (1) phenomena observation and literature study, (2) design of measuring instruments, (3) content validity assessment, (4) face validity assessment, (5) data collection, (6) scoring, (7) criterion validity assessment, (8) construct validity assessment, (9) reliability assessment, and (10) norms production.

Data collection was carried out at Public Relations study program, Faculty of Communication Sciences at three universities: (a) X University, Jakarta; (b) Y University, Bandung; and (c) Z University, Bandung. In this stage, several supporting instruments were used: (a) Microsoft PowerPoint software, (b) projector, (c) projector screen, (d) timer application, (e) speaker, (f) informed consent form, (g) answer sheet, (h) pen or pencil, (i) souvenir as an expression of gratitude for respondents' willingness to participate in this test, and (j) data processing softwares: Microsoft Excel, SPSS version 21, and Lisrel version 9.30.

D. Design

Content validity was assessed by four experts who reviewed the outcomes of VCT - ICI workflow. The eligible experts involved in this stage were those who meet these criterias: (a) possess an educational background in psychology, (b) academics holding at least a doctoral degree, (c) have conducted and published studies on the topic of creativity, (d) have a Google Scholar profile with an H-index of at least 10. The content validation assessment results state that all items (content) of VCT - ICI are truly able to measure aspects of creativity. It is then concluded that VCT - ICI is valid in terms of content. In the next procedure, face validity was assessed by involving five students majoring in public relations. The results show that there were still several question items and work instructions that were difficult for respondents to understand. On this basis, several changes were made in these items and instructions to make them easier to understand. Therefore, it is

concluded that VCT - ICI is also valid in terms of appearance.

After content and face validity assessment, data collection were carried out. Afterwards, the fluency, flexibility, elaboration, and originality aspects were scored. In the fluency aspect, the number of phrases produced by respondents in the 16 items was counted. For example, if they produces 1 phrase in each item, then the fluency score given is 16. In the flexibility aspect, each repeated word in the phrases was given a score of only 1. For example, if in item number 1, respondents produce 2 phrases, where there are words "very creative" in the first phrase and "creative creation" in the second phrase, then the flexibility score given from these two phrases is 1. In the elaboration aspect, the number of all words in the phrases produced by respondents were counted. For example, if they produce 2 phrases in item number 1, where there are 3 words in the first phrase and 4 words in the second phrase, then the elaboration score given is 7.

In the originality aspect, the originality score norms were created first by making a list of basic words and counting how many times these words appear. These norms were then calculated using the percentile rank. After the originality score norms were obtained, a score was given to the words produced by respondents. If the word is ranked > 90%, then the score given is 0; if the word is ranked 51–90%, then the score given is 1; if the word is ranked 21–50%, then the score given is 2; if the word is ranked ≤ 20%, then the score given is 3. The originality score was then calculated based on the originality score norms that had been created. The rules for assessing the originality aspect were based on agreement with one of the reviewers. A scoring example of the originality aspect in VCT - ICI is if respondents write the phrase "high quality". The word "quality" is ranked 60% and "high" is ranked 30% so that the word "quality" obtains a score of 1 and "high" obtains a score of 2. Therefore, the resulting originality score of the phrase "high quality" is 3.

IV. RESULTS

In this study, analyses were carried out to assess the criterion validity, construct validity (homogeneity of evidence), reliability (via split-half reliability), and norms of VCT - ICI. The analyses results are described as follows.

A. Criterion Validity of VCT - ICI

Criterion validity was assessed trough a predictive validity test to see whether VCT - ICI could predict the academic achievements of students majoring in public relations in the future based on their GPA. Based on the analysis of the fluency aspect using Spearman correlation calculations (1-tailed), it is revealed that the fluency aspect has a significant correlation with GPA. Table 4 shows the correlation results.

Tabel 4. Correlation between aspects of creativity and GPA score

Aspects	r	p
Fluency	0.404**	0.000
Flexibility	0.422**	0.000
Elaboration	0.490**	0.000
Originality	0.499**	0.000

**Correlation is significant at the 0.01 level (1-tailed)

It is shown in Table 4 that the relationship between aspects of creativity and GPA scores is highest in the originality aspect (r_s (199) = 0.499; $p < 0.01$). This correlation shows that the higher the score of originality aspect, the higher the GPA score. In general, it is concluded that the VCT - ICI measurement score results can predict GPA score. These findings thereby support the first hypothesis (H1).

B. Construct Validity of VCT - ICI

Construct validity (homogeneity of evidence) was assessed using confirmatory factor analysis (CFA). The measurement results of goodness of fit's five indicators show that $X2 = 0.253$, $p > 0.05$; GFI = 0.99; CFI = 1.00, and Standardized RMR = 0.00489. This indicates that the four aspects of VCT - ICI (fluency, flexibility, elaboration, and originality) are homogeneous in measuring the same underlying construct, namely creativity, suggesting that these four aspects demonstrate a fit model. Based on these results, it is also inferred that there is a good relationship among the measuring results of the aspects of creativity. Overall, it is concluded that the higher the creativity score, the higher the individual's fluency, flexibility, elaboration, and originality scores. These findings thereby support the second hypothesis (H2).

C. Reliability of VCT - ICI

The split-half reliability method was employed to assess the internal consistency of VCT - ICI. The 16 question items were divided into two groups, namely 8 odd-numbered and 8 even-numbered items, then the total scores of each aspect in these two groups were correlated. Table 5 shows the Spearman correlation results for each aspect.

Tabel 5. Correlation between aspects of creativity in odd-numbered and even-numbered items

Aspects	r (odd-even)	p
Fluency	0.575**	0.000
Flexibility	0.159*	0.024
Elaboration	0.552**	0.000
Originality	0.336**	0.000

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)

It is shown in Table 5 that the scores of four aspects of creativity in the odd-numbered item positively correlate with those of even-numbered items, with the correlation values ranging from 0.159 to 0.575. This means VCT - ICI exhibits reliable information or internal consistency between the creativity measurement results in the odd-numbered items and those of even-numbered items. These findings thereby support the third hypothesis (H3).

D. Norms of VCT - ICI

In this study, norms could determine the level of creativity of students majoring in public relations. The resulting norms are percentile norm, which shows the percentage of subjects in a standardized sample obtained through a certain raw score (Gregory, 2013). There are two levels of norms produced in VCT - ICI, namely norms per aspect and overall norms. Firstly, norms per aspect comprise fluency, flexibility, elaboration, and originality norms. Fluency norm is obtained by calculating the number of phrases produced by respondents for all items, then the percentile norm is calculated from the total score obtained. Flexibility norm is obtained by counting the repetitions of words, both in the same and different phrases, for each question item, then the percentile norm is calculated from the total resulting score. Elaboration norm is obtained by counting the number of words in the phrases produced by respondents, then the percentile norm is calculated from the total score produced. Originality norm is obtained by adding up the score of each word used by respondents in creating a phrase, then the percentile norm is calculated from the total score obtained. Secondly, overall norm is obtained by calculating the total percentile norm score of these four aspects, then the percentile norm is calculated from this total score. Detail regarding norms of VCT - ICI are not presented in this article due to word limitation.

V. DISCUSSION

The Verbal Creativity Test - Indonesian Creative Industries (VCT - ICI) is a creativity measuring tool made in the form of either written or verbal language. In this test, respondents are asked to create as many phrases as possible from the available words. This test consists of work instructions, additional instructions, example of questions and wrong and right answers, and 16 question items. These items consist of the names of 16 subsectors of Indonesia's creative industries, namely (a) crafts/handicrafts; (b) culinary/food; (c) performing arts; (d) fine arts; (e) product design; (f) visual communication design/graphic design, (g) software/game applications; (h) films, animations, and videos; (i) architecture, (j) interior design; (k) publishing (books/newspapers/magazines); (l) television and radio; (m) advertising; (n) fashion; (o) photography; and (p) music.

Compared to the existing verbal creativity measuring tools, such as the Torrance Test of Creative Thinking - Verbal (TTCT - Verbal) and the Verbal Creativity Test (VCT), VCT - ICI offers several advantages. Firstly, it is a creativity measuring tool particularly designed in alignment with current phenomena, namely the development of Indonesia's creative industries. This is shown by the question items in VCT - ICI, which use the names of 16 subsectors of Indonesia's creative industries. Secondly, VCT - ICI is able to specifically measure the creative potential of students majoring in public relations. Until now, there is no measuring tool that has been created to assess the creativity of students majoring in public relations. Thirdly, VCT - ICI is more efficient owing to its capacity to measure creativity using one subtest, while TTCT - Verbal and VCT comprise numerous subtests. However, despite these advantages, VCT - ICI also has several drawbacks: its processing period is quite long (30 minutes); it still provide quite long working instructions and example of questions and answers; and it is considered less effective in practice, since the scoring process is still conducted manually.

In developing VCT - ICI, it was revealed that this test exhibits validity in terms of face, content, criteria, and construct. Face validity was proven via assessment conducted on students majoring in public relations. The results show that they understand the workflow of VCT - ICI. Content validity was proven via assessment by four experts. The results state that VCT - ICI is able to measure the aspects of creativity, leading to a conclusion that this test is declared valid in terms of content.

Criterion validity was assessed through a predictive validity test by correlating the VCT -ICI measurement score with the GPA score. This

aimed to see to what extent the aspects of creativity in VCT - ICI can predict future learning achievement.

This assessment results reveal that the aspects that have a positive and significant correlation with the GPA score are fluency, elaboration, and originality. Meanwhile, the aspect that has a negative and significant correlation with the GPA score is flexibility.

Positive correlation shows that the higher the scores of fluency, elaboration, and originality aspects obtained by respondents during VCT - ICI, the higher the GPA score. Vice versa, the lower the scores of fluency, elaboration, and originality aspects they obtain, the lower the GPA score.

Negative correlation shows that the higher or more positive the score of flexibility aspect obtained by respondents during VCT - ICI, the lower the GPA score. Conversely, the lower or more negative the score of flexibility aspect they obtain, the higher the GPA score. This indicates that the flexibility aspect measured by VCT - ICI can predict GPA, but in the opposite way.

The negative correlation between the flexibility aspect and GPA may occur because the higher the GPA score, the better the respondents' ability to make phrases. Therefore, each resulting phrase is a complete phrase consisting of a conjunction or particle. This causes respondents to use many conjunctions or particles repeatedly in making phrases so that the flexibility score obtained becomes increasingly negative. On this basis, the more negative the flexibility score, the higher the respondents' GPA score.

In addition to exhibit validity in terms of face, content, and criteria, VCT - ICI also demonstrates construct validity. This is evident from the CFA results, where fluency, flexibility, elaboration, and originality are homogeneous in measuring the same underlying construct, namely creativity. Therefore, it is concluded that VCT - ICI exhibits construct validity.

In developing VCT - ICI, split-half reliability was employed to ascertain whether this verbal creativity test demonstrates internal consistency. In this method, the 16 question items of VCT - ICI were divided into two groups, namely 8 even-numbered items and 8 odd-numbered items. Then, the scores of the four aspects of creativity from each of the 8 items were calculated. Afterwards, the total scores of each aspect in these two groups were correlated. Based on the correlation results, VCT - ICI is stated to show internal consistency because the results obtained are positive and significant.

The standard norm used in measuring verbal creativity of students majoring in public relations is percentile rank. The resulting norms comprise fluency norms, flexibility norms, elaboration norms, originality norms, and overall norms.

VI. CONCLUSION

Based on all findings obtained, this study concludes four main things: (a) the Verbal Creativity Test - Indonesian Creative Industries (VCT - ICI) consists of work instructions, additional instructions, example of questions and wrong and right answers, and 16 question items measuring four aspects of creativity: fluency, flexibility, elaboration, and originality; (b) VCT - ICI is declared valid in terms of face, content, criteria, and construct; (c) VCT - ICI is stated to has internal consistency (proven via split-half reliability); and (d) in developing VCT - ICI, percentile norms were produced for the fluency, flexibility, elaboration, originality, and overall aspects.

There were two main limitations in this study. Firstly, the respondents were not homogeneous. In data collection, difficulties were faced in obtaining permission to collect data at several universities, which were initially selected as the destination for this purpose. All universities where the data collection were initially conducted are A accredited and located within the Jakarta region. However, the permission to collect data was not obtained on the ground that the test administration took too long. Hence, data collection via sampling technique was employed instead, taking into account the convenience, availability, and ease of access (Ellison et al., 2009).

Secondly, this study did not conduct screening for very unique words or foreign words, whereas this is important for the development of originality norm. The screening was proven difficult, since the Microsoft Excel software used in data processing displayed words automatically without paying attention to how they are written as well as the completeness of the letters and types of word.

This study's findings provide several suggestions for future studies in the same topic. Firstly, it is necessary to aim for the homogeneity of targeted respondents. To achieve this, data collection could be carried out by considering the faculty or study program accreditation, particular environment, or other factors that could control the homogeneity of targeted respondents.

Secondly, VCT - ICI could not only be used to measure the creativity of students majoring in public relations, but also those of majoring in advertising, journalism, and literature, since the latter three also require high levels of creativity in the form of both written and verbal language. This is important to enrich the studies' findings in this topic, since public relations practitioners could also come from graduates of advertising, journalism, literature, and other related majors.

Thirdly, future studies could also involve public relations practitioners as respondents, since they are people who work directly in the field of public relations and need creativity in their daily activities. In particular, their involvement as respondents is also important for the development of creativity norms, that is via alignment with the current level of public relations practitioners.

Fourthly, it is also recommended that future studies conduct screening for very unique words or foreign words to further develop the originality norm. For these words, it is necessary to pay attention to how they are written, whether connected or separated, as well as the completeness of the letters and the types of word.

Finally, as a practical suggestion, it is recommended for universities that have public relations study program in their faculty of communication sciences to select the students enrolling in public relations major using a verbal creativity test. This aims to ensure that they possess good creativity and are prepared for lectures that demand high levels of creativity. Besides, this test is also needed to assess whether graduates of this major are truly fit to be ready-to-use public relations practitioners.

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