Motivational perspective on students cheating during COVID-19 pandemic as the basic variable to create research instrument

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Abstract - COVID-19 pandemic brought all activities remotely, especially in education. All institutions tried to provide an E-Learning platform to facilitate the teaching-learning process for delivering the material, teaching process, and conducting an assessment. All were changing, focusing on the assessment process; not all institutions could provide online proctoring technology, which opened cheating among students. This study was done using a structural literature review to find the dependent and independent variables in designing a questionnaire. The data was taken by typing keyword academic dishonesty in google scholar during January – March 2021 and took three journals at random to identify the theory of motivation and honesty among students in cheating. The instrument was evaluated by quantitative research to assess the validity and reliability coefficient value. This study provided us with the fact that collaboration, lack of mutual trust, and policy, as part of academic dishonesty types, were the main factors challenging the students to act dishonesty in doing online tests. The instrument tested was also valid with all points are on the range of 0.6-0.8, and for the reliability, showed the best result on point 0.94. The validity and reliability measurement shows that the instrument is acceptable for measuring the students' motivation in doing academic dishonesty and can be conducted for a larger population with more varied backgrounds and levels.

Keywords: academic dishonesty, cheating, motivation, online test

1. Introduction

Academic dishonesty is a persistent challenge for all institutions and teachers all around the world. Baran (2020) found that disinhibition in psychology and mastery goal orientation triggered academic dishonesty. He also agreed that this issue had been a familiar consequence for both the students and the institution. Considering that fact, the school should put academic dishonesty in character building to form academic integrity. Moreover, Bolin studied this phenomenon in 2014 and stated that academic dishonesty is a persistent and pervasive problem. Similar studies were also stated by Herdian and Lestari (2018), who stated that most Indonesian students were identified cheating at the mid-test and final test and in all assignments given by the teacher. This phenomenon becomes worrying since academic honesty is one of the most required characteristics that the students must perform. It will depict their competence, but later in the actual work life, it can reflect their social quality and value. This ironic condition was also supported by Chirumamilla (2020), who surveyed the cheating perspective. She found that cheating is more accessible at an exam and gets worse if conducted with bringing own device.

Although this problem has not been a new circumstance, the real action has not been successful in solving or reducing this main problem; even the problem gets global worldwide. The latest issues were introduced by Dejene (2021), who investigated 1246 students from public and private secondary schools. She found that most students were actively involved in most cheating behaviour academically, with a prevalence rate of around 80%. This condition proves that academic dishonesty is under all institutions' priority and parents' concern.

This study will be the first step to identify the primary root triggering academic dishonesty among students. This study is aimed to find the fixed variable for academic dishonesty in India and Pakistan, then adjust it to develop the independent variable that mostly appears among Indonesian students. Those countries are represented as the developing country in Asia with many complexities, such as religious issues, cultural diversity and enormous population, and un similar academic facilities and human resources. Anita and Sundaram (2021) focused on academic dishonesty among undergraduate students in India. She identified the dishonesty behavioural type and the reasons behind this dishonesty. It can be fascinating because she also took a similar intention on the gender differences in the prevalence of academic behaviour. At the same time, the other study stated by Arshad et al (2021) paid more attention to dishonesty behaviour among higher education in India. Moreover, the last reference for this study is Herdian et al (2021), who emerged as the reason behind the academic dishonesty among college students in Muhamadiyah University Purwokerto.

Compared to the previous studies, this study will make a random sampling questionnaire to dig more information about the academic dishonesty type, the reason triggering the academic dishonesty, and the teacher's rule to motivate honesty during an online test in covid-19 pandemic using Google form. The instrument that has been designed and developed will be analysed using validity and reliability measurement.

2. Method

The survey research methodology needs a valid instrument for gaining reliable data. The questionnaire was developed using vignette testing and measured in factorial validity. It assessed the instrument's performance in context to measure the motivation, attitude, and decision to evaluate the outcome. The statistical model factor analysis to find the validity and reliability of the instrument before it is used in the varied background and a larger population. At the same time, the instrument itself is designed using vignette analysis to depict situational

conditions closely to their authentic experiences to relate it to their conscious preferences in an online class. Skilling (2018) explained that Vignette testing is developed through a vignette framework that consists of the construction (conception, design, and administration), adjusted with a variable for each element and description to create situational questions with choices to help respondents decide their preference.

There are many studies relating to academic dishonesty, and those types will be compiled and defined to design and develop the research instrument. Rettinger (2010) mentions that students' level increased academic dishonesty, religiosity improved students' integrity, non-science courses appeared as a subject with cheating opportunity, and school regulation also created motivation. That research becomes the fundamental consideration for defining the independent variable in designing and creating the research instrument. In this research, the author added one more variable relevant to answering online class challenges: teacher. In this research, these model questions are further discussed on motivation, religiosity, course content, lecturer, and school or system. As the control or independent variable, those variables are related to the independent variables taken from the types of academic dishonesty. The questionnaire framework can be seen from the following figure 1.
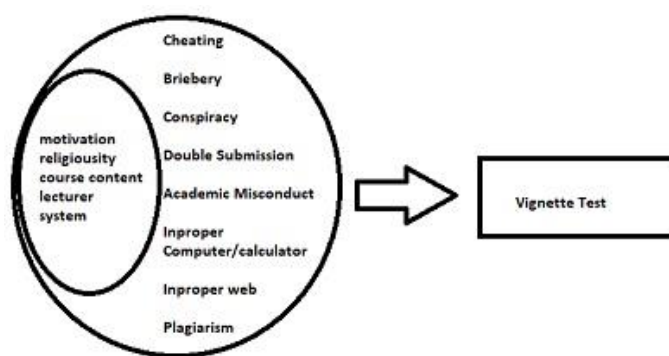

Figure 1. Vignette Test Design

The instrument design consists of five subtopics taken from the dependent variable, split into six questions that link and match the dependent variable with the independent variable. In order to develop the vignette questionnaire, this instrument was elaborated using Maslow Hierarchy of Needs to identify the students' motivation perspective in academic dishonesty. Through an identification of psychological, safety, love/belonging, esteem and self-actualisation, the instrument guideline is generated, and later it will be developed into a situational vignette question. The example of the instrument question can be seen from the following example.

Sub Topic   : Religiosity
Independent Variable   : Cheating
Question   : Ketika sedang ujian semester dan saya menemukan kesulitan dalam mengerjakan soal, saya menyontek pekerjaan teman agar nilai saya tetap bagus meskipun saya mengetahui hal tersebut merupakan perbuatan tidak benar dan dosa dalam agama saya."I found difficulty in online mid-test, then I decided to copy paste my friends' work to get good score, although I did understand that it was not appropriate in my religion"
Answer   : 1 2 3 4 5   (disagree-totally agree)

The instrument above was designing a situational condition by relating students' motivation to the type of academic dishonesty, in this case, religiosity, to measure the students' preference. Best (1998) wrote the quantitative research theory mention the quality of a good

test and inquiry based on Pearson validity testing and Spearman-Brown reliability testing. The following equation can analyse pearson validity measurement.

$$r_{xy} = \frac{n\sum_{i=1}^{n} x_i y_i - \sum_{i=1}^{n} x_i \sum_{i=1}^{n} y_i}{\sqrt{\left(n\sum_{i=1}^{n} x_i^2 - \left(\sum_{i=1}^{n} x_i\right)^2\right)\left(n\sum_{i=1}^{n} y_i^2 - \left(\sum_{i=1}^{n} y_i\right)^2\right)}}$$

rx = correlation coefficient
n = respondent
X = per item score
Y = total score

Figure 2 Pearson Validity Equation

Table 1 Interpretations of validity coefficients

Validity coefficient values	Interpretation
0,8 – 1,0	Strongly Valid
0,6 – 0,8	Valid
04, – 0,6	Likely to be Useful
0,2 – 0,4	Depend on circumstances
0 – 0,2	Unlikely to be Useful

While the reliability score is measured using a split-half technique by Spearman-Brown as below:

$$r_{11} = \frac{2r_{\frac{1}{2}\frac{1}{2}}}{1 + r_{\frac{1}{2}\frac{1}{2}}}$$

r11 = Reliability instrument
r1212 = Correlation Index

Figure 3 Spearman-Brown Reliability Equation

Table 2 Interpretations of internal consistency reliability coefficients

Internal consistency reliability coefficient value	Interpretation
0,8 – 1,0	Excellent
0,6 – 0,8	Good
0,4 – 0,6	Adequate
0,2 – 0,4	Less Applicable

The instrument's validity and reliability were measured from 103 despondences from Informatics and Computer Engineering Department among the random population from semesters 1, 3, and 5 spread in four majorities (Informatics Engineering, Digital Multimedia Technology, Multimedia and Networking Engineering and Computer Network Engineering). While the instruments to measure consist of 30 questions from 5 subtopics.

3. Results and Discussion
Creating and Designing Instrument

The motivational perspective for the students to act dishonesty cannot be separated from self-efficiency, goal theory and expectancy theory. The following three questions can represent those three theories; can I do it? What will I achieve? Furthermore, What I expect from it? In manifesting those three ideas into the research instrument, this study follows the following questionnaire guideline.

Table 3 Motivational Perspective in Every Variable

No	Dependent Variable	Motivation	Religiosity	Lecturer	Content Course	System	Question's Topic
1	Cheating	Can I do this exam without looking at the note? What is my motivation for completing this exam? What do I expect from finishing this subject/exam?	Does my faith help me face this exam? What can my religiosity affect me to accept my test result? What can I hope for from this exam?	Can the lecturer identify if I am cheating? What can I do to get the minimum requirement from my lecturer? What can I expect from my lecturer?	Can the course easy to understand? What should we learn to be a success in the exam? What can I expect from the course and the material?	Can the system allow cheating? What is the function of the system? What are the strength and weaknesses of the system?	Motivation Less confident Achievement Religiosity Safety Friendship collaboration Lecturer Safety Unmotivated lecturer Content Course long course content with too many questions to answer System Open access system
2	Conspiracy	Can I do this exam myself? What is my goal to do the exam? What do I expect from the questions list?	Does my God help me face this exam? What can my religiosity make me honest? What do I expect myself should be in an exam?	Similar identification			Motivation Less Creativity and lack of prejudice Religiosity Morality Less Acceptance on fact Lecturer Indiscipline lecturer Content Course Difficult topic System No proctor Open access
3	Duplicate submission	Can I do this exam with academic integrity? What is my	Does my religiosity help me to be honest? What can				Motivation No problem solving No creativity Religiosity Safety and
4	Academic Misconduct						

No	Problem			Identification	
		motivation in completing the exam?	my religiosity do to motivate me to be integrated?		relationship Lecturer Indiscipline lecturer (resource)
		What do I expect after submitting the task?	What can I expect religiosity to help me understand my strength?	Similar Identification	Content Course Similar course content System Take-home assignment via E-Learning
5	Improper online web	Can I do this exam without googling some references?	Does my faith help me to trust answering with my own words?		Motivation Less academic goal. Less confidence
		What is my aim in completing this exam?	What can my religiosity remind me not to open web during the exam?		Religiosity Feeling safe in collaboration Lecturer Never giving feedback
		What do I expect from the internet?	What can I hope this exam affect my pride?		Content Course Popular issue System Less proctor
6	Plagiarism	Can I do avoid plagiarism? What is my motivation to work with references? What do I expect in completing this exam?	Does my faith motivate me to respect others' work? What can my religiosity affect my full writing? What can I hope from doing the proper citation?	Similar Identification	Motivation No creativity No academic objective No problem solving Religiosity Safe to copy-paste as long as giving the citation. Less respect for others. Less morality Lecturer Busy lecturer and never giving feedback. Content Course Essay /writing report System Take-home assignment in E-Learning

Total Vignette Questions	30

Table 3 provides us with a guideline in developing a vignette questionnaire based on a motivational perspective. This perspective of motivation was taken from Maslow hierarchy of needs.
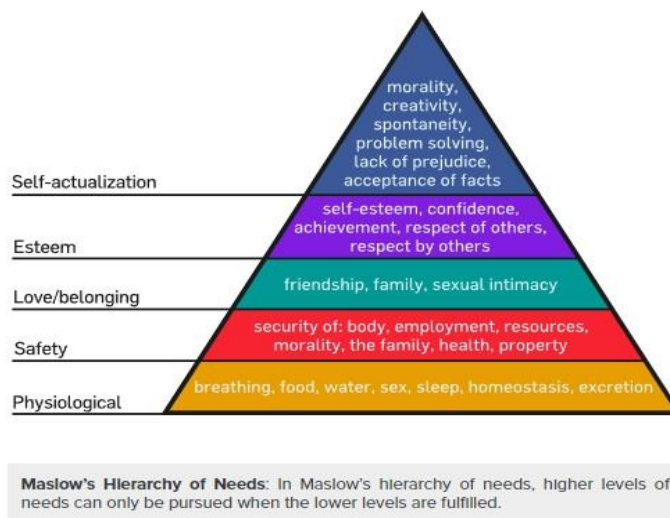

Figure 2 Malow's Hierarchy of Needs

Based on Maslow's Hierarchy of Needs, we can draw a line into students' motivation in academic dishonesty. The motivation is measured from the safety stage, belonging, esteem and self-actualisation. Most of the motivation reflexes esteem and self-actualisation. In the vignette test, the situation described is an experience that relates to confidence, achievement or academic objectives, creativity and problem-solving. While the perspective in religiosity is related more to morality, respecting others, lack of prejudice and Acceptance of facts. As the primary and secondary resources for a learning process, the lecturer and course content are influenced more by the source need from the safety level.

The motivation perspective covers all levels of Maslow's hierarchy of needs. The students' physiological and the system itself as the essential component in scrutinising the motivation perspective can be seen from Table 4 below.

Table 4 The Needs Distribution

Motivation	Need	Religiosity	Need	Lecture and Course Content	Need	System	Need
Q1	Esteem	Q7	Safety	Q13/Q19	Safety	Q25	Belonging
Q2	Self-Actualisation	Q8	Esteem	Q14/Q20	Belonging	Q26	Belonging
Q3	Self-Actualisation	Q9	Safety	Q15/Q21	Belonging	Q27	Belonging
Q4	Self-Actualisation	Q10	Safety	Q16/Q22	Belonging	Q28	Belonging
Q5	Esteem	Q11	Safety	Q17/Q23	Belonging	Q29	Belonging
Q6	Self-Actualisation	Q12	Esteem	Q18/Q24	Safety	Q30	Belonging

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Table 4 shows the needs distribution in creating vignette testing instrument main powering with Maslow's hierarchy need to identify the motivation perspective in conducting academic dishonesty. We can underline that self-actualisation and esteem play a strong influence in motivating students to do academic dishonesty. At the same time, safety tends to influence someone's belief and religiosity. Moreover, lecturer, course content and system are categorised by the need of belonging. It can be seen that the motivation perspective appears from inside attributes related to esteem and self-actualisation.

In contrast, outside attribute, likes lecturer, course content and system, relates more to belonging. The needs that students most reflect in cheating is less confidence, less achievement goal and friendship. In contrast, the students tend to be less creative and lack prejudice for academic misconduct and double submission. It will be different with plagiarism as the most done in academic dishonesty covers all the needs from safety, belonging, esteem and self-actualisation.

Testing the Validity and Reliability Coefficient Value

The research instrument should be valid and reliable to measure its acceptability and functionality. The instrument testing in this study is Pearson validity analysis and Spearman-Brown reliability analysis. The statistical calculation is done per item to find the correlation coefficient. From the distribution of the score of each item and the total scores, we found that the validity coefficient value is valid and the internal consistency reliability coefficient values are high and acceptable. The validity and reliability results can be seen in Table 3 below.

Table 5 Validity and Reliability Coefficient Value

No	Dependent Variable	Validity Value					Reliability Value
		Motivation	Religiosity	Lecturer	Course Content	System	
1.	Cheating	0,699	0,754	0,672	0,406	0,79	
2.	Conspiracy	0,695	0,769	0,422	0,755	0,848	
3.	Duplicate submission	0,397	0,483	0,309	0,441	0,711	0,94442589
4.	Academic Misconduct	0,609	0,515	0,658	0,537	0,624	
5.	Improper online web	0,765	0,567	0,745	0,686	0,736	
6.	Plagiarism	0,556	0,634	0,542	0,552	0,688	

The first independent variable reminds valid for the dependent variable named "the course content", although it only represents a 0,4-validity value. It is applicable because it reflexes the science and non-science students' different online test behaviours. The same case also happens to "conspiracy" since it only performs 0,4 connecting to "the lecturer". Conversely, other variables depict high valid values. This condition is maintained because the lecturer's attitude significantly defines the students' preference for conspiracy or honesty. Dyer (2020) stated that students would engage with academic dishonesty if no lecturer monitored and controlled the class.

It focused on independent variable number three, namely "duplicate submission", as applicable for the dependent variable named "System" only. The writer omitted motivation that had 0,39 value, religiosity with only a 0,48 value, lecturer on a 0.30 value, and course content with a 0.4 value because it will not make any purposive impact for academic dishonesty during an online class. While for the rest, variables are accepted and applicable as an element in the

research instrument to survey the students' motivation in academic dishonesty during the online test.

4. Conclusion

This instrument is functioned to measure students' academic dishonesty in conducting online classes, and it is designed based on five dependent variables and six types of academic dishonesty. It is developed based on motivation perspective from Maslow's hierarchy needs starting from safety, belonging, esteem until self-actualization stage. The perspective then is elaborated into situational questions using a vignette to give the actual existence based on the students' academic experiences. To publish this instrument, validity and reliability testing are necessarily needed. It is defined that among 30 vignette questions, four are less applicable, and the other 26 remain valid to be applied. This questionnaire also performs a good quality measurement with a 0.9 reliability efficiency value that can be concluded as accepted and applicable. It means that this instrument is recommended for measuring a larger population and with various background studies and academic levels.

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