



Validity and Reliability of the Academic Motivation Scale: Study of The Activist Student in College

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Abstract

Validity and reliability are essential to the effectiveness of any data-collecting research procedure. This study was to test the validity and reliability of the Academic Motivation Scale (AMS), consisting of 28 questions with. The questions was used a Likert scale of 1-7 on each question point. This instrument is grouped into seven dimensions, namely intrinsic motivation to know (IMK); intrinsic motivation towards achievement (IMA); intrinsic motivation to experience stimulation (IMES); extrinsic motivation to identify (EMId); extrinsic motivation to introjected (EMInt); extrinsic motivation external regulation (EMR); and amotivation (AM). The researcher set a sampling quota of 100 activist students as respondents from various faculties at the State University of Surabaya. This research is survey research with a quantitative approach. The data collection technique was a questionnaire filled out by respondents online. The data analysis technique was by conducting validity and reliability tests using SPSS. A total of 28 questions in the AMS questionnaire were declared valid with a Sig. (2-tailed) value of <0.05. Reliability in the AMS questionnaire with a Cronbach's Alpha score of .864. It was concluded that the AMS instrument can be used to measure the achievement motivation of activist students.

Keywords: validity, reliability, academic motivation scale, activist student

Abstrak

Validitas dan reliabilitas sangat penting bagi efektivitas setiap prosedur penelitian pengumpulan data. Penelitian ini bertujuan untuk menguji validitas dan reliabilitas Skala Motivasi Akademik (AMS) yang terdiri dari 28 pertanyaan dengan skala likert 1-7 pada setiap butir pertanyaan. Instrumen ini dikelompokkan menjadi tujuh dimensi, yaitu motivasi intrinsik untuk mengetahui (IMK); motivasi intrinsik untuk berprestasi (IMA); motivasi intrinsik untuk mengalami stimulasi (IMES); motivasi ekstrinsik untuk mengidentifikasi (EMId); motivasi ekstrinsik untuk introjeksi (EMInt); motivasi ekstrinsik regulasi eksternal (EMR); dan amotivasi (AM). Peneliti menetapkan kuota sampel sebanyak 100 mahasiswa aktivis sebagai responden dari berbagai fakultas di Universitas Negeri Surabaya. Penelitian ini merupakan penelitian survei dengan pendekatan kuantitatif. Teknik pengumpulan data menggunakan kuesioner yang diisi oleh responden secara online. Teknik analisis data dengan melakukan uji validitas dan reliabilitas menggunakan SPSS. Sebanyak 28 pertanyaan dalam kuesioner AMS dinyatakan valid dengan nilai Sig. (2-tailed) bernilai < 0,05. Reliabilitas pada kuesioner AMS dengan skor Cronbach's Alpha sebesar 0,864. Disimpulkan bahwa instrumen AMS dapat digunakan untuk mengukur motivasi berprestasi mahasiswa aktivis.

Kata kunci: validitas, reliabilitas, skala motivasi akademik, mahasiswa aktivis



INTRODUCTION

Intrinsic and extrinsic motivation play an important role in encouraging students to achieve academic achievement. Students who have intrinsic motivation tend to be more persistent and enjoy the learning process because they feel personally satisfied when they understand the material or achieve academic goals. Extrinsic motivation can also be a powerful motivator, for example through scholarships, awards, or support from family and friends. The combination of these two types of motivation can help students to stay consistent in learning and face academic challenges. Academic achievement is one of the key factors in determining students' success in their future careers (Mappadang et al., 2022).

Achievement motivation, especially in an academic context, is essential for students to achieve success in their studies. When someone has a strong drive to achieve, they tend to be more disciplined, persistent in facing challenges, and not easily give up when experiencing difficulties. In the academic world, this motivation can arise from the desire to get high grades, master a field of knowledge, or even meet the expectations of oneself or others. Factors such as the learning environment, support from lecturers, friends, and family can also affect a person's level of motivation. Academic motivation measured using the Academic Motivation Scales (AMS) (Ghiasvand et al., 2017; Syah, 2019; Wu et al., 2020).

Both activist students and regular students who are not actively involved in organizations have the drive to achieve according to their respective interests and goals. Activist students tend to have broader achievement motivations, not only in academics but also in leadership, organizational management, and service to students and the community. They are usually driven by the desire to contribute, improve soft skills such as communication and teamwork, and build networks that can be useful in the future. Achievement for them is often measured through success in running work programs, effective leadership, and the influence they have on the campus environment.

On the other hand, students who are not actively involved in organizations on campus generally focus more on personal academic achievement. They tend to be more motivated to get high grades, graduate on time, and prepare themselves for the world of work through more in-depth study or internship experience. Their motivation is often intrinsic, such as the desire to understand the lecture material well, or extrinsic, such as family encouragement and career demands. Individuals with high achievement motivation usually have characteristics such as discipline, perseverance, goal-oriented, and do not

give up easily when facing obstacles. In the world of education, this motivation is an important factor in determining a person's success.

Questionnaires are one of the most widely used tools in social science research to collect data related to human behavior. The main purpose of using questionnaires is to obtain relevant information in a reliable and valid manner. For a questionnaire to be effective, the questions must be clear, unambiguous, and easy for respondents to understand. In addition, each question must be relevant to the research objectives and use an appropriate measurement scale, such as the Likert Scale to measure attitudes or opinions. To ensure the quality of the data obtained, the questionnaire also needs to be tested for validity and reliability so that the research results can be trusted. By considering these aspects, questionnaires can be an effective tool in collecting accurate and useful information for research. (Taherdoost, 2018). Validation of research instruments is very important to ensure that the measuring instrument used actually measures what should be measured. With validation, the data obtained becomes more accurate and reliable, so that the research results are more credible. Validation also plays a role in increasing the consistency of the instrument, ensuring that the data produced remains stable if used repeatedly under the same conditions. Some types of validity that are commonly used include content validity, construct validity, and criterion validity, each of which focuses on a particular aspect of measurement. In addition to validity, the reliability of the instrument also needs to be tested so that the results obtained remain consistent and reliable in the study.

The main types of validity in research include face validity, content validity, construct validity, and criterion validity. Face validity is a subjective assessment of the appearance of a research instrument, including readability, format suitability, and clarity of language. Validity is ensuring that the instrument covers all aspects relevant to the variables being studied without reducing the meaning of the indicators being measured. Construct validity concerns the extent to which the instrument can represent the concept or behavior to be measured operationally. Meanwhile, criterion validity measures how well the instrument can predict or damage other desired outcomes, whether in the past, present, or future. By ensuring validity in research, the results obtained become more accurate and reliable (Taherdoost, 2018).

Reliability is the extent to which the results of a measurement can be trusted or, in other words, the level of test consistency. A test is said to be reliable if the test is carried out repeatedly and the

results will remain the same or relatively the same (Hulfian & Subakti, 2022).

Although a number of instruments that assess achievement motivation have been developed, efforts are still needed to continue exploring how to measure the instruments so that they are appropriate to the characteristics of the sample (Smith, 2015). The general objective of this study is to determine the validity and reliability of AMS in college students. The specific objective is the translation of validity and reliability in each dimension of AMS.

METHODS

Research Design

This study employed a survey research design with a quantitative approach. The researcher set a sampling quota of 100 students as respondents, selected from various faculties at the State University of Surabaya. The participants were campus activist students who were members of the university-level Student Executive Board (BEM-U).

Data Collection

The data were collected using an online questionnaire, which was distributed to respondents via Google Forms. The questionnaire included items from the Academic Motivation Scale (AMS) along with respondent identity details such as name, student ID number, and faculty. The researcher set a one-month deadline for completion, ensuring that responses were gathered efficiently. The questionnaire was disseminated through the Student Executive Board administrators at the State University of Surabaya.

Data Analysis

The collected data were analyzed using IBM SPSS. To assess the validity of the Academic Motivation Scale, the Pearson Product-Moment formula was applied. Meanwhile, Cronbach's Alpha was used to test the reliability of the scale.

RESULT

This study involved 100 student respondents from various faculties. The Faculty of Medicine had the highest number of respondents, with 32 students, while the Faculty of Engineering had the lowest, with only one respondent.

The validity test results for each dimension of the Academic Motivation Scale (AMS) instrument are as follows:

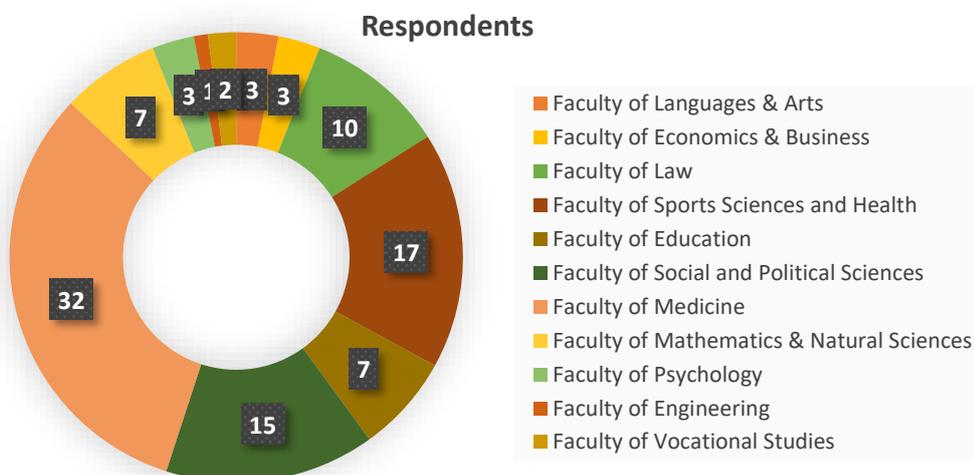
- Intrinsic Motivation to Know (IMK): Sig. (2-tailed) = 0.000 < 0.05 → Valid
- Intrinsic Motivation to Accomplish (IMA): Sig. (2-tailed) = 0.000 < 0.05 → Valid
- Intrinsic Motivation to Experience Stimulation (IMES): Sig. (2-tailed) = 0.000 < 0.05 → Valid
- Extrinsic Motivation Identified Regulation (EMId): Sig. (2-tailed) = 0.000 < 0.05 → Valid
- Extrinsic Motivation Introjected Regulation (EMInt): Sig. (2-tailed) = 0.000 < 0.05 → Valid
- Extrinsic Motivation External Regulation (EMR): Sig. (2-tailed) = 0.000 < 0.05 → Valid
- Amotivation (AM): Sig. (2-tailed) = 0.000 < 0.05 → Valid

The reliability test using Cronbach's Alpha resulted in a value of 0.864, which is above the threshold of 0.6, indicating that the AMS instrument is reliable. Based on the Pearson Product Moment and Cronbach Alpha values, it can be concluded that the AMS instrument is valid and reliable for measuring achievement motivation among student activists.

DISCUSSION

Academic motivation is a crucial factor that influences students' ability to develop higher-order thinking skills, optimize the learning process, and enhance satisfaction with the educational environment. It plays a significant role in

Figure 1. Respondents from various faculty



determining students' persistence in completing assignments and striving for academic excellence (Sivrikaya, 2019). Motivation is regarded as a fundamental aspect of human behavior, widely explored in the field of education, with various theories providing frameworks for understanding individual motivational patterns (Barkoukis et al., 2008).

The AMS instrument is based on Self-Determination Theory, which explains how internal and external factors regulate human behavior. This theory emphasizes how individuals internalize personal motives and regulate their actions autonomously, ultimately contributing to better performance and overall well-being (Utvær & Haugan, 2016). The results of this study support previous findings that AMS can effectively measure students' academic motivation (Miulescu, 2019; Zeng & Yao, 2023).

Ensuring the validity and reliability of research instruments is critical for obtaining accurate and consistent data (Hayati & Lailatussaadah, 2016). Validity tests, such as the Pearson Product Moment analysis, measure whether an instrument accurately assesses the intended constructs. Reliability, on the other hand, is tested using Cronbach's Alpha, which determines the internal consistency of an instrument. A reliable instrument produces stable results across different applications, reducing the risk of measurement errors and increasing the credibility of research findings (Ningsih et al., 2021; Puspasari et al., 2022).

The process of instrument validation minimizes potential biases and errors that could distort research interpretations. By ensuring the alignment of the instrument with the research population, the results become more representative and generalizable. Consequently, validation is an essential step in research to ensure accurate and dependable findings. Additionally, reliability testing is necessary to confirm that the instrument consistently produces stable data when applied repeatedly under similar conditions. Instruments with high reliability provide consistent outcomes, thereby enhancing the credibility and reproducibility of the research. Common reliability testing methods include internal consistency analysis, test-retest reliability, and inter-rater reliability assessments. These procedures ensure that the collected data is accurate, objective, and suitable for further statistical analysis.

CONCLUSIONS

A total of 28 questions in the AMS questionnaire were declared valid with a Sig. (2-tailed) value of <0.05. Reliability in the AMS questionnaire with a

Cronbach's Alpha score of .864. It was concluded that the AMS instrument can be used to measure the achievement motivation of students who are activists on campus. Measuring achievement motivation is important because lecturers are asked to support student achievement, including findings from educational programs such as training and efforts to improve achievement motivation in students.

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