Educational Evaluation Instruments

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ARTICLE INFO	ABSTRACT
Volume: 3 **KEYWORD** Evaluation Instruments, Validity, Reliability, Competency, Tests, Non-Tests	Educational evaluation instruments are essential tools for measuring and assessing student learning outcomes. This text comprehensively discusses the definition, functions, objectives, characteristics, and types of educational evaluation instruments. Effective evaluation instruments must meet the criteria of validity, reliability, objectivity, practicability, and economy. The types of evaluation instruments are divided into two main categories: tests (written, oral, practical) and non-tests (observation, interview, questionnaire, portfolio). Each type of instrument has its own strengths and challenges in its application. Selecting the appropriate instrument is crucial to ensure accurate and comprehensive assessment of students' learning progress, as well as to provide useful information for educators in improving the quality of teaching. This text emphasizes the importance of evaluation instruments in supporting educational accountability, curriculum development, and overall improvement of educational quality.

1. Introduction

Educational evaluation instruments are crucial components in modern educational systems. The evolution of educational theory and practice has driven the development of more comprehensive and accurate evaluation instruments. In this context, evaluation is no longer viewed as a separate process but is integrated into the overall learning process, enabling a more holistic assessment of student development.

The increasing demand for accountability in education has prompted educational institutions to develop evaluation instruments that can measure the effectiveness of educational programs more precisely. This is not only important for internal stakeholders but also for external parties such as governments and communities that demand transparency in the use of educational resourcess.

Advancements in information and communication technology have opened new opportunities in the development of evaluation instruments. Technology-based evaluations allow for more efficient data collection, deeper analysis, and more comprehensive presentation of results. However, this also poses new challenges related to data security and equitable access to technology, Johnson & Morgan (2016).

The diversity of learners, in terms of cultural background, learning styles, and abilities, necessitates the development of more flexible and inclusive evaluation instruments. Modern evaluation instruments must be able to accommodate these differences without compromising assessment standards and objectivity. This presents a unique challenge in the design and implementation of evaluation instruments, Brookhart (2018).

The globalization of education has created a need for evaluation standards that can be compared internationally. Evaluation instruments no longer focus solely on local or national contexts but must also consider global perspectives. This is crucial to ensure that graduates possess competencies relevant to an increasingly interconnected global context.

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The paradigm shift from content-based assessment to competency-based assessment also influences the development of evaluation instruments. The focus of evaluation is now not only on theoretical knowledge but also on practical abilities and soft skills required in the workplace. Evaluation instruments must be capable of measuring not just "what is known" by students, but also "what can be done" with that knowledge.

2. Literature Review
2.1 instrument
According to Helen Sabera Adib (2017: 139), an instrument is a tool that is created and compiled following certain procedures and steps that are used to collect data. So it can be concluded that Instruments, in the context of education, refer to tools or devices used to collect data and information. These encompass various forms of measurement tools, such as tests, questionnaires, observation sheets, or assessment rubrics. Instruments are designed with specific purposes to measure or evaluate certain aspects of the learning process or student learning outcomes. The accuracy and reliability of instruments are crucial because the data collected through these instruments will form the basis for analysis and decision-making in the educational process.

2.2 Evaluation
According to Ihwan Mahmudi (2011:112), educational evaluation is a form of educational system mechanism that aims to review the educational process that has been carried out over a certain period of time. So it can be concluded that Evaluation is a systematic process of collecting, analyzing, and interpreting information to determine the extent to which educational objectives have been achieved. Evaluation involves assessing the quality, effectiveness, or value of an educational program, policy, or practice. This process is not limited to measuring student learning outcomes but also includes assessing various aspects of the educational system, such as curriculum, teaching methods, or teacher performance. The main purpose of evaluation is to provide information that can be used to improve the quality of education and support evidence-based decision-making in the educational context.

3. Methodology
Research methodology is a way of obtaining information through scientific channels, namely rational, valid, and systematic approaches. The purpose of research methodology is to discover scientific facts through experimentation, critical analysis, and reconstruction. According to Sugiyono (2016: 24), the scientific method means that research activities must be based on the characteristics of science, which are rational, empirical, and systematic. Rational means that research activities are conducted using reason, making them comprehensible to human logic. Empirical means that the methods used can be observed by human senses, allowing others to perceive and examine the employed techniques. Systematic refers to the process used in research following specific logical steps.

3.1 Type of Research
This research is a literature study. A literature study is a research method that involves an in-depth examination of various scientific sources relevant to the topic being studied. This process includes identification, analysis, and synthesis of information from various publications such as books, scientific journals, research reports, and other reliable sources. The main purpose of a literature study is to build a comprehensive understanding of a topic, identify gaps in existing knowledge, and provide a strong theoretical foundation for further research. According to Whayudin Darmalaksana (2020: 6), a literature study is a research method that involves systematic and critical examination of various literature sources relevant to the research topic. This process includes collecting, evaluating, and synthesizing information from various scientific sources such as textbooks, academic journals, research reports, and other scientific publications. Thus, the compilation of this scientific work is based on the results of analysis from various sources related to the research topic, data from various references including books, articles, journals, and other people's papers found in libraries, on Google Scholar sites, and Google Scholar

3.2 Data Sources
This research utilizes secondary data sources derived from pre-existing publications or documents. The data sources include books, articles, journals, and papers by other researchers that are available in libraries, on Google Scholar, and other scholarly search engines relevant to the current research topic. These sources are carefully selected to ensure their relevance and reliability in supporting the ongoing study.

4. Results and Discussion
4.1 Definition of Educational Evaluation Instruments

In the context of educational evaluation, an instrument can be defined as a device or tool used to measure student learning outcomes across cognitive, psychomotor, and affective domains. In line with this perspective, Astuti & Fani Setiani (2020: 4) state that educational evaluation instruments are tools used in the process of assessing and measuring students' learning outcomes, aimed at collecting data and information relevant to learning objectives. According to Arief Aulia & Cut Eva (2019:12), educational evaluation instruments are systematic tools to create and determine decisions about the extent to which students have achieved teaching objectives.

Furthermore, Anisa Auliya (2021:6) explains that educational evaluation instruments are tools or devices used to collect, analyze, and interpret data about students' learning processes and outcomes to determine the level of achievement of learning objectives. In the context of modern education, evaluation instruments are not limited to conventional written tests but also include various forms of assessment that can measure students' Higher Order Thinking Skills (HOTS). Nunung Nuriyah (2016:77).

Thus, from these definitions, it can be concluded that educational evaluation instruments are assessment tools designed and used by educators to measure, assess, and evaluate learning outcomes and student development in the educational process. From this perspective, it can be seen that educational evaluation instruments play a crucial role in ensuring the quality and effectiveness of the learning process, as well as supporting appropriate decision-making in curriculum development and teaching strategies.

4.2 Functions of Educational Evaluation Instruments

Educational evaluation functions play a crucial role in the learning process and the overall development of the education system. According to Beddu Mahira (2017:6), evaluation serves as a tool to measure the level of success of students in achieving predetermined learning objectives. Meanwhile, Khairiah et al. (2022:2) state that through evaluation, educators can identify students' strengths and weaknesses, and provide constructive feedback for improving the teaching and learning process.

Furthermore, Achmad Widodo & Desi Kurnia Sari (2023:5) argue that evaluation also acts as a diagnostic instrument to detect students' learning difficulties, enabling educators to design more effective learning strategies tailored to individual students' needs. Sukardi (2015:8) posits that in a broader context, educational evaluation functions as a basis for decision-making in various aspects of education, such as curriculum planning, learning program development, and general improvement of educational quality. According to Zainal Arifin (2017:16), evaluation also has a motivational function, where evaluation results can encourage students to enhance their learning efforts and motivate teachers to improve their teaching methods. Kusaeri (2014:13) further explains that evaluation functions as an educational accountability tool, providing stakeholders with information about the effectiveness of educational programs and the utilization of existing resources.

From the various definitions presented above, the author concludes that educational evaluation instruments have a vital function as measurement and assessment tools in the learning process. These tools play an essential role in collecting accurate and relevant data regarding students' development, understanding, and achievements. Through the use of appropriate evaluation instruments, educators can obtain a comprehensive picture of students' learning progress, identify areas that need improvement, and assess the effectiveness of the teaching methods applied.

4.3 Objectives of Educational Evaluation Instruments

Educational evaluation instruments have multidimensional objectives that encompass various aspects of the learning process. The primary aim is to measure and assess the level of student achievement against predetermined learning objectives (Wenny Hulukati & Maryam Rahmi, 2020: 5). Through the use of appropriate instruments, educators can obtain accurate and comprehensive data on students' learning progress, which is then used as a basis for pedagogical decision-making (Elis Ratna & Rusdiana, 2013: 12).

Evaluation instruments also aim to diagnose students' learning difficulties, identify their strengths and weaknesses, and provide constructive feedback for improving the learning process. Furthermore, Arikunto (2018:18) states that these instruments aim to facilitate objective and fair assessment, motivate students to improve their performance, and provide stakeholders with information about the effectiveness of educational programs. Sudjana (2017:3) adds that in a broader context, the purpose of educational evaluation instruments is to support the improvement of learning quality, curriculum development, and overall enhancement of the education system.

Evaluation in the context of education has several specific objectives, including:

1. Encouraging student motivation in the educational process. Evaluation plays a crucial role as a catalyst that ignites enthusiasm and drive for students to continuously improve their academic performance. Without assessment, students might lack the incentive to improve and develop their abilities.

2. Identifying and analyzing factors that contribute to students' success or failure in following the learning program. With this understanding, educators can formulate appropriate solutions and improvement strategies to address the challenges faced by students. (Sudijono, 2015: 16-17)

From the above definitions, the author concludes that educational evaluation instruments aim to measure and assess student learning achievements objectively and comprehensively. These tools enable educators to collect accurate data on student progress, identify areas that need improvement, and provide constructive feedback.

4.4 Characteristics of Educational Evaluation Instruments

In a good educational evaluation instrument, there are components that serve as benchmarks, namely:

a. Validity

Validity: A valid evaluation instrument is capable of accurately measuring what it is intended to measure. Validity ensures that the evaluation results truly reflect the ability or aspect that is meant to be assessed, Yusuf Efendi & Achmad Widodo (2019: 369).

b. Reliability

Reliability refers to the consistency or stability of measurement results. A reliable instrument will provide relatively similar results when used repeatedly on the same subject under similar conditions. Rahmad Fadli, et al. (2023: 2). This guarantees that evaluation results can be trusted and do not fluctuate randomly.

c. Objectivity

Objectivity: An objective evaluation instrument produces assessments that are free from bias or subjectivity of the assessor. Objectivity is achieved when various assessors can reach the same conclusions based on clear and measurable criteria, Arikunto (2018:75).

d. Practicability

Practicability: This characteristic refers to the ease of use of the evaluation instrument. A practical instrument is easy to implement, administer, and interpret results without requiring excessive effort or special skills, Arikunto (2018:77).

e. Economy

Economy: An economical evaluation instrument is efficient in terms of cost, time, and effort. This means that the instrument can be used without expending excessive resources, while still being able to provide quality results, Arikunto (2018:79).

4.5. Types of Educational Evaluation Instruments

Types of educational evaluation instruments refer to various tools or methods used to measure, assess, and evaluate students' learning achievements in the educational process. These instruments are designed to collect valid and reliable data about students' progress, understanding, and skills in various aspects of learning.

Each type of instrument has specific characteristics, uses, and purposes in the context of educational evaluation. Selecting the appropriate instrument is crucial to ensure that the evaluation process can provide an accurate and comprehensive picture of students' learning development, as well as provide useful information for educators to improve the quality of teaching.

4.5.1 Test Instruments

a. Written Tests

Written tests are evaluation methods that require students to answer questions or complete tasks in writing. This form includes various formats, such as multiple choice, essays, short answers, or matching. Written tests are effective in assessing students' conceptual understanding, analytical abilities, and written communication skills. The advantage of these tests lies in their ability to evaluate a large number of students simultaneously and provide clear documentation for further assessment. Majid (2015:190).

b. Oral Tests

Oral tests involve direct interaction between the examiner and the student through verbal question and answer. This method is very useful for assessing oral communication skills, deep understanding, and students' quick thinking. Oral tests allow examiners to delve deeper into students' understanding and provide immediate feedback. However, these tests take longer and can be influenced by the examiner's subjectivity. Zainal Arifin (2017:124).

c. Practical Tests

Practical tests, on the other hand, require students to demonstrate their skills or abilities in real situations or simulations. This type of test is crucial in assessing practical competencies, especially in fields that require technical or psychomotor skills. Practical tests provide a more accurate picture of students' ability to apply their knowledge, but their implementation can be time-consuming and require more resources. Kusaeri (2013:89).

4.5.2 Non-Test Instruments

a. Observation

Observation instruments are evaluation tools used to systematically observe and record various aspects of student behavior, performance, or interaction in the learning environment (Arikunto, 2018:45). This method allows educators to collect direct data about students' learning processes through systematic and objective observation.

Through observation instruments, evaluators can capture learning dynamics that are difficult to measure with traditional assessment methods. These tools are highly effective for assessing non-cognitive aspects such as social skills, attitudes, interests, as well as students' practical and psychomotor abilities. In practice, observation instruments can take the form of structured observation sheets, rating scales, checklists, or anecdotal records. Their use requires precision and objectivity from the observer in interpreting and documenting behavior relevant to the evaluation objectives.

b. Interview

Interview instruments in the context of educational evaluation are assessment tools that involve direct interaction between the assessor and the student through structured or semi-structured questioning. According to Asep & Fadilah Aisah (2019:92), an interview is a form of oral communication conducted by two or more people in a structured manner, which can be done either face-to-face or remotely. This instrument is particularly useful for assessing students' oral communication abilities, conceptual understanding, and critical thinking skills.

According to Eko Putro (2016:126), in its implementation, interview instruments can take the form of structured interview guides with pre-prepared questions, or semi-structured formats that allow the interviewer to ask follow-up questions based on the student's responses. The effectiveness of this instrument greatly depends on the interviewer's skills in building rapport, asking relevant questions, and accurately interpreting responses.

Although interview instruments offer a depth of information that is difficult to obtain through other methods, their use also presents challenges such as the time required, potential for subjectivity, and difficulties in standardizing assessment.

c. Questionnaire

A questionnaire is a data collection tool consisting of a series of written questions or statements designed to obtain information from respondents about their attitudes, perceptions, or experiences related to aspects of learning. Indrawati, et al. (2019: 120). Questionnaires can contain closed questions with predetermined answer options, open questions that allow respondents to provide free answers, or a combination of both. This instrument is very useful for assessing the affective dimensions of learning, such as learning motivation, interest in subjects, or satisfaction with teaching methods.

Although effective in many situations, the use of questionnaires also has limitations, such as the possibility of respondents misinterpreting questions or providing inaccurate answers. Therefore, careful questionnaire design and testing of its validity and reliability are crucial to ensure the quality of the data obtained.

d. Portfolio

From an etymological perspective, the term portfolio is a combination of two word elements. The first element, 'port', is an abbreviation of 'report'. Meanwhile, the second element, 'folio', means comprehensive or complete. Thus, when these two elements are combined, portfolio can be interpreted as a comprehensive documentation encompassing various activities and achievements of an individual over a certain period.

A portfolio is an evaluation method that involves the systematic collection of students' work over a specific period to assess their development, progress, and learning achievements. Portfolios function as documentation of the learning process that showcases students' efforts, progress, and achievements in one or several areas of study.

This Portfolio instrument allows educators to assess students' abilities holistically and authentically, covering cognitive, affective, and psychomotor aspects. Portfolios can contain various types of work such as writings, projects, test results, self-reflections, and other evidence of achievement that demonstrate the development of students' skills and understanding over time.

Although beneficial, the use of portfolios also presents challenges such as the time required for management and assessment, as well as the need for clear and consistent assessment criteria. Therefore, thorough planning and a good understanding of the objectives of using portfolios are essential to maximize their effectiveness as evaluation instruments.

4.6 Steps in Developing Educational Evaluation Instruments

The development of educational evaluation instruments is a systematic process to create valid and reliable measurement tools. According to Djemari Mardapi (2018:95-102), the following are the main steps in developing educational evaluation instruments:

1. Determination of Evaluation Objectives: The initial step is to establish specific goals for the evaluation to be conducted. This includes identifying the learning aspects to be assessed and the expected outcomes of the evaluation process.

2. Preparation of Instrument Blueprint: Develop a blueprint or grid that includes dimensions, indicators, and items or statements to be used in the instrument.
3. Writing Instrument Items: Compose questions or statements according to the prepared blueprint, paying attention to aspects of clarity, accuracy, and alignment with evaluation objectives.
4. Review and Revision of the Instrument: Conduct a review of the prepared instrument, both internally and through expert judgment, to ensure quality and alignment with objectives.
5. Instrument Pilot Testing: Conduct a limited trial to assess readability, respondent understanding, and instrument effectiveness in real situations.
6. Analysis of Pilot Test Results: Analyze data from the pilot test to determine the instrument's validity and reliability, and make revisions if necessary.
7. Instrument Finalization: Refine the instrument based on analysis results and make final improvements before the instrument is ready for use.
8. Preparation of Usage Guidelines: Develop a guide or manual containing detailed instructions on how to administer, score, and interpret the instrument results.

5. Conclusion

Educational evaluation instruments are tools used to measure student learning outcomes in cognitive, psychomotor, and affective aspects. These instruments function to gauge student success, identify their strengths and weaknesses, and serve as a basis for decision-making in curriculum development and teaching strategies. Their main purpose is to measure student achievement, diagnose learning difficulties, and improve overall learning quality.

The characteristics of good educational evaluation instruments include validity, reliability, objectivity, practicability, and economy. Validity ensures that the instrument measures what it is supposed to measure, reliability guarantees consistency of results, objectivity avoids bias, practicability relates to ease of use, and economy concerns resource efficiency.

Educational evaluation instruments are divided into two main types: test and non-test instruments. Test instruments include written, oral, and practical tests, each with its own advantages and challenges. Meanwhile, non-test instruments encompass observation, interviews, questionnaires, and portfolios. Each type of instrument has specific characteristics and uses in assessing various aspects of student learning.

Selecting the appropriate instrument is crucial to ensure accurate and comprehensive evaluation of student learning progress. Although each instrument has its strengths, they also face challenges in their application, such as time requirements, potential subjectivity, or difficulties in standardizing assessment. Therefore, educators need to thoroughly understand the characteristics and purposes of each instrument to optimize the educational evaluation process.

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