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Assessment Need, Competencies And Its Challenges In The Paradigm Shift Of Education

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Abstract: Assessment is the systematic basis for making inferences about the learning and development of students. It is the process of defining, selecting, designing, collecting, analysing, interpreting, and using information to increase students' learning and development. The four pillars of assessment are purpose, validity, reliability and value. Assessment is not an end in itself but a vehicle for educational improvement. There is no perfect tool of assessment with Efficiency and Fairness. All the assessment methods, material models, tools should be introduced in advance before going for the actual assessment. Pay attention to learner wellbeing- Psychological and Consider the potential consequences of assessment. The main challenges in assessment are higher order skills like creativity, innovation, evaluation, critical thinking, computational thinking etc. Automation of assessment so that self-assessment is promoted to validate and use the existing tools in the market. The challenges continuous as effective use of Aggregate and Disaggregate data for assessment decision, data generation, curation of skills, formative assessment individual level and following individual learning styles. The assessment may be text based descriptive responses and creating proper rubrics by integrating market expectations (skills, knowledge) into assessment tools based on the market acceptance for our assessment.

Keywords: Assessment, competencies, cognitive domain, Challenges and Validity.

1. Introduction

The process of assessing, measuring, or valuing anything is referred to as assessment. It refers to assessing and determining the characteristics, worth, or essence of a specific object, circumstance, or person. It can include a range of techniques, including assessments, observations, tests, and analyses, with the goal of comprehension performance, skills, strengths, flaws, and areas for growth. In many disciplines, including education, psychology, business, healthcare, and others, assessment is essential because it yields insightful information that facilitates goal-setting, decision-making, progress monitoring, and overall outcome improvement.

2. Review of Literature

Bulger and colleagues (2020) focused on the implementation of competency-based teacher education in Physical Education. The researchers highlighted the importance of aligning teacher education programs with the identified competencies required for effective teaching in Physical Education. By integrating competency-based approaches, teacher education programs can better prepare future educators to meet the specific demands of the field, ultimately enhancing students' cognitive learning experiences.

According to Li et al. (2019) study found that the teachers who possessed higher competencies in assessing students' movement skills and providing appropriate feedback had a positive influence on students' cognitive understanding of movement concepts and skills. This study highlights the importance of teacher competencies in promoting cognitive learning through effective assessment and feedback strategies.

Assessment refers to a variety of tasks by which teachers collect information regarding the performance and achievement of their students (**Gronlund, 2006**). Researchers emphasized that assessment has two main purposes. One reason is for student learning and the second is for certification, which involves the evaluation of student achievement (**Carless, 2015; Norton, Norton, & Shannon, 2013**). "Assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences; the process culminates when assessment results are used to improve subsequent learning." (**Huba and Freed, 2000**).

3. Methodology

The present research is analytical study. The informations, findings and figures are presented in the study derived from various articles published by various researchers from the year 2000 to 2020. From the source, the researcher understood that many authors have published the paper related to this article as informative data than the research oriented data. From this point as a research scholar it is emphasises that there is need of real filed study in the title of assessment in education especially in the state of Tamil Nadu, India.

4. Education Assessment and its factors

4.1 Assessment role in Education

The systematic method of collecting data and assessing students' learning progress, abilities, knowledge, and accomplishments in a classroom setting is known as educational assessment. It employs a variety of techniques to assess a student's comprehension, critical thinking, problem-solving skills, and general academic achievement, including exams, quizzes, projects, observations, and other assessment instruments. The purpose of educational evaluation is to give teachers important knowledge about each student's areas of strength, weakness, and need for development. In order to improve student learning experiences and outcomes, assessment is useful in developing curriculum, creating learning objectives, and adjusting teaching strategies. Furthermore, educational assessment is essential for determining how well instructional strategies and programs work in practical.

4.2 Competencies

Competencies is necessary to effectively navigate the changing educational landscape in light of the paradigm shift. The new paradigm of education places greater value on critical thinking, adaptability, and technical competency than it does on traditional knowledge acquisition. An increased focus on innovation and creativity challenges students to think inventively and unconventionally, developing an entrepreneurial spirit and the ability to come up with original ideas. Digital literacy, which includes using technology for study and work with skill, has become essential in along with these. In this educational paradigm, adaptability, and a continuous learning attitude are essential for empowering people to take advantage of chances for lifetime learning and swift changes. Overall, the proficiencies needed for this paradigm shift comprise a diverse range of abilities that enable people to prosper in a constantly changing educational environment.

4.3 Cognitive Domain

The Cognitive Domain is a key component of the educational paradigm shift that promotes the development of higher-order thinking abilities over rote memorization and simple knowledge recall. The purpose of this change is to help students develop their analytical skills, critical thinking, problem-solving ability, and deeper comprehension. These days, educators work hard to create learning opportunities that inspire students to participate in activities that foster creativity, critical thinking, problem-solving and the application of information in practical settings. The new educational paradigm seeks to better equip students to successfully traverse challenging situations, adapt to changing settings, and flourish in a variety of spheres of their lives by placing a stronger priority on the development of these higher-order cognitive skills.

4.4 Challenges

The main challenges in assessment are 1. Higher order skills like creativity, innovation, evaluation, critical thinking, computational thinking etc 2. Automation of assessment, so that self-assessment is promoted to validate and use the existing tools in the market. 3. Effective use of aggregate and disaggregate data for assessment decision, data generation, curation of skills, formative assessment individual level and following individual learning styles 4. The assessment may be text based descriptive responses and creating proper rubrics by integrating market expectations (skills, knowledge) into market acceptance. 5. Undertaking evaluations without considering social realities can have different pass marks for different medium students for different languages 6. The content or structure of knowledge that students need to acquire in each domain, which require various cognitive skills measuring the complexity of the skills and the situation or context in which knowledge and skills are applied or drawn on difficulty in giving real life situations.

4.5 Paradigm Shift

A major and fundamental shift in the conception, methodology, and application of education is referred to as a paradigm shift in the field of education. It entails an abrupt shift from established practices, viewpoints, paradigms in favour of fresh, innovative, and frequently unconventional methods of learning, instruction and evaluation. It might also entail incorporating new technology, accommodating a range of learning preferences, emphasizing practical applications, and placing a strong emphasis on critical thinking, creativity, teamwork, and problem-solving abilities. A paradigm shift in education recognizes the value of flexibility, lifelong learning, and the acquisition of skills that position people for success in a modern, interconnected, and dynamic society in order to address the changing demands of students in a world that is changing rapidly.



Figure 1: Global Trends in Assessment

4.6 Assessment Models and Metrics

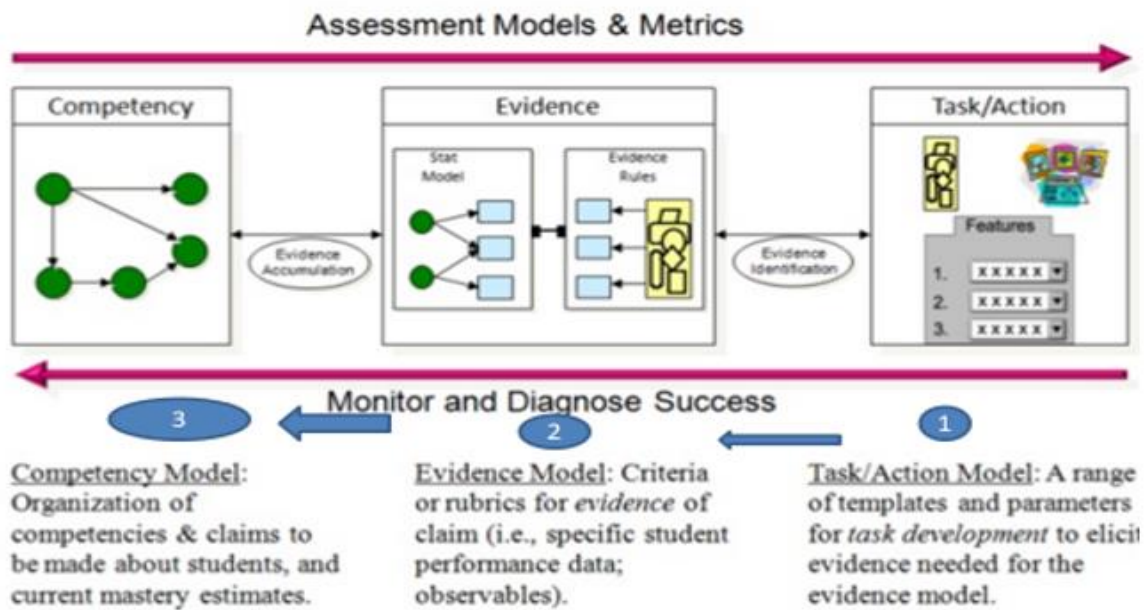


Figure 2: Design and Diagnosis

4.7 Validity

The concept of validity is concerned with the extent to which your questionnaire measures what it purports to measure, and is often rephrased as “truthfulness,” or “accuracy”. There are four types of validity: content validity, criterion-related validity, construct validity, and face validity. **Content validity:** Refers to the degree that the instrument covers the content that it is supposed to measure. For content validity two judgments are necessary: the measurable extent of each item for defining the traits and the set of items that represents all aspects of the traits. An example is a measurement of the human brain, such as intelligence, level of emotion, proficiency or ability. **Criterion-related validity:** It is a technique that evaluates a test or measurement's validity by looking at how well it predicts or correlates with a certain outcome that is thought to be meaningful. It aids in assessing how effectively a test or measurement tool predicts a person's behaviour or performance in a certain circumstance. **Construct validity:** Refers to how well a measure, measures the construct it was designed to measure. For example, if a measure claims to measure self-esteem, the researcher must make sure it is actually measuring self-esteem and not intelligence or memory.

Face Validity: It is the superficial look or degree to which a test or measurement tool seems, on the surface, to measure what it promises to measure is known as face validity. It is an informal, subjective metric that gauges how effectively a test seems to measure the construct it is intended to measure, according to the opinions of those who are knowledgeable about the test's subject matter.

5. Conclusion

The students and teachers in the field of education has to understand the need of assessment and its implications. Any assessment which has taken for the actual implication, it has to possess the following, the assessment is FOR (for) learning, assessment AS(as) learning and assessment OF (of) learning. The assessment also has to follow its validity and reliability. The validity of an assessment instrument is generally not determined by its format but by its content. Reliability is the extent to which test results are reproducible and can be seen as one of the important components of the validity argument.

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