Do you have the requisite competencies to assess so that you do not penalise the learner? 7 factors assessors need to address in assessment design and application

[1]Yudhistir S.M.F. Jugessur

ABSTRACT: *The word assessment is derived from the Latin assidere, meaning "to sit beside or with" . Assessment is an important part of the teaching and learning process. It is a process to verify if learning and teaching has taken place. This paper depicts the seven factors , namely validity, reliability, practicality, authenticity, transparency, fairness and equity that need to be considered when designing assessment for learning, of and as learning. The three approaches are Assessment of Learning, Assessment for Learning and Assessment as Learning. There are mainly three types of assessment ; diagnostic, formative and summative. Diagnostic assessment is done before the beginning of the lesson, formative assessment is performed along the teaching process like for examples tests, homework and class work. While summative is at the end of the term in the form of exams or final projects. The purpose of summative is normally for benchmark setting and grades assignment. Along all these assessment types and assessment approaches Assessment of Learning is summative, intended to certify learning and report to parents and students about students' progress in school, usually by identifying students' relative position compared to other students. Assessment of Learning in classrooms is typically done at the end. Assessment for Learning offers an alternative perspective to traditional assessment in schools. Assessment for Learning shifts the emphasis from summative to formative assessment, from making judgments to creating descriptions that can be used in the service of the next stage of learning. When they are doing Assessment for Learning, teachers collect a wide range of data so that they can modify the learning work for their students. Assessment as Learning is a Self-monitoring and self-correction or adjustment by the student himself for personal goals and external standards. It is a self regulated learning , normally done by high flyers.*

I.   INTRODUCTION

Assessment is the ongoing process of gathering, analysing and interpreting evidence reflecting on findings making informed and consistent judgements to improve student learning. Assessment for improved student learning and deep understanding requires a range of assessment practices to be used with three overarching purposes: Assessment for learning occurs when teachers use inferences about student progress to inform their teaching (formative assessment). Assessment as learning occurs when students reflect on and monitor their progress to inform their future learning goals (formative assessment). Assessment of learning occurs when teachers use evidence of student learning to make judgements on student achievement against goals and standards (summative assessment).

Assessment of learning refers to strategies designed to confirm what students know, demonstrate whether or not they have met curriculum outcomes or the goals of their individualized programs, or to certify proficiency and make decisions about students' future programs or placements. It is designed to provide evidence of achievement to parents, other educators, the students themselves, and sometimes to outside groups (e.g., employers, other educational institutions). Assessment of learning is the assessment that becomes public and results in statements or symbols about how well students are learning. It often contributes to pivotal decisions that will affect students' futures. It is important, then, that the underlying logic and measurement of assessment of learning be credible and defensible. The purpose of assessment of learning is to measure, certify, and report the level of students' learning, so that reasonable decisions can be made about students.There are many potential users of the information: (i) teachers to communicate with parents about their children's proficiency and progress (ii) parents and students who can use the results for making educational and vocational decisions (iii) potential employers and post-secondary institutions who can use the information to make decisions about hiring or acceptance (iv) principals, district or divisional administrators, and teachers who can use the information to review and revise programming. Assessment of learning requires the collection and interpretation of information about

students' accomplishments in important curricular areas, in ways that represent the nature and complexity of the intended learning. Because genuine learning for understanding is much more than just recognition or recall of facts or algorithms, assessment of learning tasks need to enable students to show the complexity of their understanding. Students need to be able to apply key concepts, knowledge, skills, and attitudes in ways that are authentic and consistent with current thinking in the knowledge domain.

Zimmerman and Schunk (1989) have particularly developed the concept into a learning framework. They claim that principally it is 'an organising concept' in which learners 'cognitively, motivationally and behaviourally promote their own academic achievement'. Pintrich (2000) further explores this notion by suggesting four assumptions that underpin self-regulated learning: (1) The active construction assumption – implying that learners are viewed as active constructors in their own learning. (2) The possibility for control assumption – that all learners can potentially control, monitor and regulate aspects of their own cognition, motivation and behaviour as well as aspects of their environment. (3) Goal, criterion or standard assumption – a focus for comparisons and decisions to be made upon which processes can be continued or changed. (4) Mediation between personal and contextual characteristics and actual achievement or performance. Qualitative studies provide evidence of the positive effect of feedback according to teachers', students' and other practitioners' perspectives. Such studies indicate that formative feedback is generally recognised as a tool for:
• improving learning (Carless,2005)
• changing traditional classroom practices (Kellard et al.,2008; Gipps et al.,2005)
• clarifying learning criteria (Torrance and Pryor,2001)
• raising achievement.

II.   LITERATURE
Diagnostic Assessment
Machin, Hindmarch, Murray, & Richardson (2016) stated that "diagnostic assessments inform both teacher and learner of current abilities and specific future needs". It is performed before the students start the course, before the topic is introduced since this diagnostic assessment will assess what the student already knows. It may be that due to their existing ability a lower level course would be more suitable. This is also the ideal opportunity to assess a student's Maths, English ability.A student with poor Maths and English is likely to struggle on a course that requires assignment writing as part of the assessment. Testing of prior knowledge is the beggining of the teaching process.

Formative Assessment
This is a type of assessment that is being conducted during the learning process. It is an ongoing process that "Formative assessment findings inform you of the content which needs to be covered and also the effectiveness of teaching and learning methods." (Machin, Hindmarch, Murray, & Richardson, 2016).Everything that has been taught must be assessed to ensure the students have learnt the lesson. "Learners completing practical or written exercises, taking part in short quizzes, reporting back from discussions, engaging in problem solving activities, giving short presentations or demonstrations" (Gould & Roffey-Barentsen, 2014) are both being taught and assessed at the same time. Formative assessments help students identify their strengths and weaknesses. It is serve to prepare students for the final summative exam, like for example, past exam questions on a regular basis make students familiar with the type of paper they will sit for at the end of the year.

Summative Assessment
Summative assessment like for example final year exams serve for grading purposes, benchmarking , promotion to next level and to compare students to their relative level to other students. It can also be for certificate awarding. "Summative assessment and subsequent feedback informs learners of their overall achievement, as well as an overall grade, learners need opportunities to explore progression options which may differ depending on whether they have passed or failed." (Machin, Hindmarch, Murray, & Richardson, 2016). At the end of each semester is exam week, in which students complete an exam for the majority of the units they study.

III.   FINDINGS
Albert Einstein once said that "Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid." While designing an assessment it is important to consider if the assessment is appropriate, for example, using an essay based task to assess a practical task would be inappropriate. There are seven factors to consider when designing an assessment; these are validity, reliability, practicality, authenticity, transparency, fairness and equity. Any assessor needs to consider these factors while assessing.

Factor One: Validity

The validity of an assessment is how accurately the assessment measures the relevant performance of students. The primary focus of validity is whether the assessment measures what it is intended to measure, this will include if the assessment is appropriate for the criteria, the students and the education level. The validity of all formal assessments that I produce must be first verified by an internal verifier and then an external verifier to ensure the suitability of the assessment being proposed. There are four types of validity: content validity, criterion-related validity, construct validity, and/or face validity. The validity of an assessment tool is the extent to which it measures what it was designed to measure, without contamination from other characteristics. For example, a test of reading comprehension should not require mathematical ability. There are several different types of validity:

- Face validity - do the assessment items appear to be appropriate?
- Content validity - does the assessment content cover what you want to assess?
- Criterion-related validity - how well does the test measure what you want it to?
- Construct validity: are you measuring what you think you're measuring?

Factor Two: Reliability

"If a particular assessment were totally reliable, assessors acting independently using the same criteria and mark scheme would come to exactly the same judgement about a given piece of work." (Rust, 2001). Reliability refers to whether an assessment instrument gives the same results each time it is used in the same setting with the same type of subjects. Reliability essentially means consistent or dependable results.

Factors that can affect reliability:

- The length of the assessment – a longer assessment generally produces more reliable results.
- The suitability of the questions or tasks for the students being assessed.
- The phrasing and terminology of the questions.
- The consistency in test administration – for example, the length of time given for the assessment, instructions given to students before the test.
- The design of the marking schedule and moderation of marking procedures.
- The readiness of students for the assessment – for example, a hot afternoon or straight after physical activity might not be the best time for students to be assessed.

Factor Third and Fourth: Fairness and Equity

The learners should know what is being assessed, how it is being assessed, as well as how they can achieve the assessment expectations. A fair assessment is one in which students are given equitable opportunities to demonstrate what they know (Lam, 1995). Does this mean that all students should be treated exactly the same? Equitable assessment means that students are assessed using methods and procedures most appropriate to them (Suskie, 2000).Performance assessment is a type of educational assessment in which judgments are made about student knowledge and skills based on observation of student behavior or inspection of student products. In dealing with the issue of fairness in performance assessment, educators are confronted with some dilemmas. Assuring equality in performance assessment through standardization enables comparisons of student performance and simplifies administration processes; however, it loses task meaningfulness and creates difficulty in avoiding bias. Equitable assessment practice means that learners in courses have an equal and unbiased opportunity to demonstrate their knowledge and achievements in every phase of the assessment process. The assessor should not be biased by personal gain, political interference and any vested interest.

Factor Five: Practicality

According to Gould & Roffey-Barentsen (2014) assessment is finding a balance between what is practical and affordable and at the same time giving learners the best learning and assessment environment in order to succeed.

In an ideal world each student would be assessed using multiple real world projects that exactly mimic what would be required of them once they achieve the qualification. Unfortunately, it is not practical to implement this kind of assessment due to the time duration for the assessment, the time limitation to make such an assessment, having multiple real work projects that fully assess to meet the unit criteria and the cost of implementing such an assessment would be unrealistic. It is important that the assessments "do not make unreasonable demands on the time and resources available" (SQA, 2018). A theoretical approach to increasing an assessments validity and sufficiency would be to increase the number of assessments and cover sections of the topic from multiple perspectives using multiple assessment approaches. This would make the assessment less practical as the amount of work would increase for already stretched students and assessors.

Factor Six: Sufficiency

The sufficiency factor of an assessment is that "the evidence is enough to prove competence", (Ollin & Tucker, 2008). This is an essential element of assessment as without this factor the assessment is largely irrelevant to real life. "Whilst sufficiency ensures that the teacher or assessor can be certain a learner is competent, it also means that learners are not dependent on one occasion only to demonstrate their competency." (Gould & Roffey-Barentsen, 2014).This avoids the risk of students performing badly on a particular day due to having a bad day; this can also assist the fairness aspect of assessments as one student may be having an issue that day that will not affect any other student completing the assessment.

Factor Seven: Transparency

The transparency aspect of assessments applies to "learners, teachers and external organisations (Gould & Roffey-Barentsen, 2014).It is essential that students are provided with the grading criteria and are "well aware of the standards expected of them to gain particular awards" (Gould & Roffey-Barentsen, 2014). It is essential that the marker marks the assessment following the transparent marking criteria. "You therefore need to be able to explicitly refer to the agreed criteria in your feedback so that it is clear why the mark has been awarded (Gould & Roffey-Barentsen , 2014).

IV.   CONCLUSION

In the teaching and learning process, leaners cannot be penalized for the mistake of the assessors. Good assessments yield reasonably accurate and truthful results, of sufficient quality that they can be used with confidence to make decisions about curricula and pedagogy (Suskie, 2004). Banta (2002) argued that effective outcomes assessment produces credible evidence of learning and organizational effectiveness. Bresciani (2003) stated that assessment must be trustworthy: characterized as truth-seeking/ objective/ethical and Steen (1999) said that assessment must promote valid inferences**.**

REFERENCES

[1].   Banta, T. W. (2002). Characteristics of effective outcomes assessment: Foundations and examples. In T. W. Banta & Associates, Building a scholarship of assessment. San Francisco: Jossey-Bass.
[2].   Bresciani, M. J. (2003). Expert-driven assessment: Making it meaningful. Educause Center for Applied Research (ECAR) Research Bulletin, 2003(21)Carless, D. (2005) 'Prospects for the implementation of assessment for learning'. Assessment in education: principles, policy & practice, 12(1), 39-54.
[3].   Gipps, C., McCallum, B., Hargreaves, E., Pickering, A. (2005) 'From TA to Assessment for Learning: the impact of assessment policy on teachers' assessment practice'. Paper presented at the British Educational Research Association Annual Conference, University of Glamorgan, 14−17 Sept 2005.
[4].   Gould, J., & Roffey-Barentsen, J. (2014). Achieving your diploma in education and training (1st ed.). London: Sage Publications Ltd
[5].   Kellard, K., Costello, M., Godfrey, D., Griffiths, E., Rees, C. (2008) Evaluation of the developing thinking and assessment for learning development programme. Welsh Assembly Government.
[6].   Lam, Tony C. M., 1995. Fairness in Performance Assessment. ERIC Digest.
[7].   Machin, L., Hindmarch, D., Murray, S., & Richardson, T. (2016). A Complete Guide to the Level 5 Diploma in Education & Training (Second Edition ed.). St Albans: Critical Publishing.
[8].   Pintrich, P.R. (2000). Multiple Goals, Multiple Pathways: The role of Goal Orientation inLearning and Achievement. Journal of Educational Psychology, vol.92 (3).
[9].   Rust, C. (2001). Purposes and Principles of Assessment. Oxford: Oxford Brookes University.
[10].   Steen, L. A. (1999). Assessing assessment. In B. Gold et al (Eds.), Assessment practices in undergraduate mathematics. Washington: Mathematical Association of America.
[11].   Suskie, L. (2004). What are good assessment practices? In Assessing Student Learning: A Common Sense Guide. Bolton, MA: Anker.
[12].   Suskie, L. (2000). Fair assessment practices: Giving students equitable opportunities to demonstrate learning. AAHE Bulletin, 52(9), 7-9.
[13].   Zimmerman, B. J., & Schunk, D. H. (Eds.). (1989). Self-regulated learning and academic achievement. New York, NY: Springer-Verlag