

## **Classroom Assessment Practice of Higher Education: A Case of Tribhuvan University**

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### **Abstract**

*Classroom assessment is for the improvement of a learner's diverse ability, teachers teaching strategies as well as improvement of entire educating system of institutions. This qualitative phenomenological study focused on the critical analysis of the classroom assessment practices with reference to 21st century learners' competencies and assessment techniques. The data were collected from 12 faculty members of Department of Mathematics Education, Central Department of Education, Tribhuvan University. Interview schedule and participant observation were the main tools for data collection. The data were analyzed inductively in reference to the theory of scaffolding based on ZPD (Vygotsky, 1978) based on different purposes of assessment; Assessment of, assessment for and assessment as learning. It was found that among the three purposes of assessment, assessment of learning was the dominant practice which ultimately marginalized the other two. This finding points to the need of assessment as learning and assessment for learning rather than assessment of learning, which is also exclusively focused on 21<sup>st</sup> century learning competencies.*

**Keywords:** *Classroom Assessment, Self-Assessment, Connectivity, Scaffolding*

### **Introduction**

The power of assessment in learning has been well discussed in the literature (Earl, 2010; Rawlusu, 2018) that focuses on the creation of learners' friendly learning environment. It provides feedback for the learner, insight for teachers to promote teaching strategies and guides to revisit the vision for educationist. The focus of the educating practices today is on preparing all students for the competitive future (Earl, 2010), for this, the education systems in many contexts are changing to meet the global needs (Burner, 2018).

As assessment has to ensure the achievement of the curricular goals, change in curriculum, teaching-learning system triggers alternation in the assessment practices as well. For instance, Tribhuvan University had switched the educating system from annual to semester system since 2014 (Sharma & Subedi, 2018) and the assessment system also changed accordingly, where the students were evaluated in a 60/40 pattern in which they had to attend the final written examination for 60% of the total marks, while they were evaluated internally for the rest 40%

percent. With reference to this shift in the assessment system, in this paper, I have only focused on the internal evaluation system which is directly concerned with the classroom assessment. Curriculum has directed classroom assessment as teacher bases evaluation on the basis of attendance 5%, participation in learning activities 5%, first assignment/ midterm exam 10%, second assignment/assessment 10% and third assignment/ assessment 10% out of total 40%.

In the internal assessment, the students are supposed to be engaged in various teacher-directed tasks, and concerns have been raised whether the teachers are meeting the curricular goals while implementing this internal assessment. This concern has been critically analyzed in this paper by utilizing available literature, field-based data and the relevant theories.

This study provides insight for the teacher students and policy makers to think and rethink assessment practices, especially internal assessment. Reviewed literatures pave the way of different practices and their impact in the field of internal assessment and present study provides our present situation and lacking. Therefore, this study is significant for the reform of internal assessment practices in the classroom.

### **Assessment Purposes**

Assessment provides a framework for sharing educational objectives for two reasons (Nicol & Macfarlane-Dick, 2006); certification, which is taken as summative assessment, and students' learning, which is taken as formative assessment. A successful assessment makes a blend of these two purposes (Rawlusu, 2018). Summative assessment plays the role as individual students' performance indicator that may be used for several educational purposes such as promotion, certification or admission to higher levels of education (Looney, 2011) as well as opens the door to the job market (Chu, Reynolds, Tavares, Notari, & Lee, 2017).

The literature shows that there are three overarching purposes of assessment: *assessment for learning*, *assessment as learning*, and *assessment of learning* (Earl, 2007). Summative assessment is more about assessment *of learning*, whereas formative assessment is about assessment *for learning* (Looney, 2011). Many studies (e.g. Buhagiar & Murphy, 2008; Nicol & Macfarlane-Dick, 2006; Pereira, Flores, Niklasson, & Education, 2016) claimed that the '*assessment for learning*' is better for the reinforcement of the learners as well as teachers. 'Assessment for learning' includes the '*assessment as learning*' as its subset (Earl, 2007) that emphasizes using assessment as a process of developing and supporting metacognition in which students participate in learning as the critical thinkers and critical connectors. In this process, they play active roles for self-reflection on their prior knowledge and use it for new learning (Bubnys, 2019; Earl, 2010)

### **Learning Competencies and the Assessment Requirements**

The society is being changed and the nature of the work is also being changed in 21<sup>st</sup> century. The changing nature of work and society demands today is not merely on students' acquiring information, but on their ability to analyze, synthesize, and apply what they have learned to address new problems, design solutions, collaborate effectively, and communicate persuasively (Pellegrino, 2014, p. 67). Learning and succeeding in a complex and dynamic world are not

measured by simply testing the students' knowledge of facts rather assessing their skills line critical and creative thinking in order to best establish their professional positions or career paths. In other words, rethinking in the assessment practices is required to identify whether the students have acquired the new skill relevant to the need of 21<sup>st</sup> century (Price, Pierson, & Light, 2011). In this postmodern era, the competencies including cognitive variables (e.g., critical thinking, reasoning skills) as well as non-cognitive variables (e.g., teamwork, tolerance, tenacity, curiosity) (Chu et al., 2017) are equally important for complementing their success in learning the 21<sup>st</sup> century skills.

Many researchers (Looney, 2011; Wang, Sun, & Jiang, 2018; Williams, 2014) have debated on the nature of skills required for the learners to have as 21<sup>st</sup> century competencies:(1) critical thinking and problem solving, (2) communication, (3) collaboration, and (4) creativity and innovation (Fadel, 2008; Haryano, Subkhan, & Putra, 2017). These competencies can be accessed through the different assessment techniques. As there are multiple competencies required for learners (Boun, 2021; Haryono, Subkhan, & Putra, 2017), a single one-size-fits for all type of assessment cannot measure the multiple aspects of learning specific to individual learners' learning styles, capabilities and so on. So, the 21<sup>st</sup> century assessment system needs to be responsive to learners' specificities in terms of content and modes of assessment in such a way that their multiple intelligences, capacities can be measured in an integrated way. In other words, beside the conventionalized formal techniques of assessment, alternative/multiple methods to measure the ability of diverse learner through unbiased, transparent as well as systematic way is to be considered (Bubnys, 2019; Pellegrino, 2014; Price, Light, & Pierson, 2014)

Very often, the discourses on assessment trends have prioritized more formative than summative assessment. In the contexts of higher education, the authentic assessment has been increasingly focused that encourages learners to develop their understanding, skill and critical thinking (Van Den Berg, Bosker, & Suhre, 2018). An authentic assessment helps to students to perform real-world tasks to demonstrate meaningful application of essential knowledge and skills (Sridharan & Mustard, 2015). This assessment emphasizes on the use of the assessment techniques such as real-life tasks, exhibitions, interviews, journals, observations, oral presentations, performances, portfolios, written and oral debriefing, peer- and self-assessment, Problem-solving and small group work (Rawlusu, 2018). These types of performance is listed as Authentic Assessment Techniques by (Fook & Sidhu, 2010). Luitel (2019) indicated that authentic assessment techniques were used in the classroom in different variations;*Performance Assessment-8%, Short Investigation-7%, Open-Response-9%, Portfolios-10%, Self-Assessment-6%, Written Examination-60%*. In this situation, this study has been focused on critical analysis of 'What are the circumstances that compressed teachers to choose 'written examinations' as a major weapon for students' assessment? And why the other authentic assessment techniques were less used in comparison to written examination in the classroom at the Master level in Tribhuvan University?

## **Methodology**

This qualitative study adopted phenomenology (Qutoshi, 2018) as an over arching methodological frame where internal assessment is a phenomena and teachers, even researcher expressed their lived experiences from the classroom practices. The data were gathered from six faculty

members from the Department of Mathematics Education within the Central Department of Education, Tribhuvan University. Teachers were selected purposively teaching in first, second and third semester only, fourth semester offers more practical course like Thesis, Practicum therefore fourth semester not included. Two teachers were selected from each semester teaching a content paper and pedagogy paper so that there were six teachers including myself as pedagogy teacher in total. Interview and participant observation were the main tools where five teachers were interviewed regarding the concerns about the assessment practices in their respective classrooms. Along with interview, a participant observation was conducted in the workplace as the researcher herself has been working as a full-time faculty there.

The data were analyzed critically using the general inductive approach (Thomas, 2006) supported by Social Constructivist Theory (Vygotsky, 1978). The adoption of this analytical approach is further supported by interpretive paradigm (Mack, 2010) in which the researcher played with the data integrating her own insider experiences as a teacher educator. The adoption of the Constructivist Theory implies that its worldview manifest in phenomenological studies, in which individuals describe their experiences (Creswell, 1998, p. 25) and then researchers make an interpretation of what they find.

For the ethical consideration, I had explained my research statements with my respondents clearly and their response were used only for the information. Anonymity of the respondents is preserved during the data analysis and only representative name is mentioned. The information provided by the respondents were informed and validity of the responses were cross checked using interview with selected sampled respondents.

Results were drawn with reference to assessment techniques and findings were declared on the basis of assessment purposes that teachers have been using in their respective classrooms such as ‘Assessment *of* learning, *for* learning and *as* learning.

## **Results**

Large class size, examination traditions and teachers’ readiness are the main factors that pushed up teachers to use selective examination tools as a major. Likewise, Professional skills, teachers’ attitude and inspirations are other factors that hindered the teacher to use multiple techniques for students’ assessment. Observing through the eyes of assessment purpose, ‘Assessment *of* learning’ has found been dominant compared to assessment *for* learning and assessment *as* learning in classroom assessment practice. Classroom assessment was focused on the evaluation of cognitive aspect rather than assessment of behavior aspects of learning. The teachers’ classroom assessment practices are analyzed critically based on the authentic assessment techniques.

**Performance assessment.** In this performance assessment, students can demonstrate what they have learned through presentation and solve problems through a collaborative effort in solving a complex problem together to brainstorm and utilize their separate grains of knowledge to benefit the whole. Using this technique, teachers can assess the students’ ability regarding communication skill, innovation skill, collaboration in group and can evaluate the students’ intra personal ability.

The information collected through observation and interview with all respondents, there was found the provision of the students' performance assessment in the department of mathematics education but implementation depends on teachers' hand. Being a faculty member, I, myself had observed and had interacted with other teachers about classroom assessment practice where teachers had used performance assessment but it's difficult to manage due to the large number of students in classroom (up to 50). A teacher teaching content expressed a practice as, *"we use the concept of performance assessment often as the second assignment where students' presentation used to be organized. For the presentation, either we provide presentation topic or students select themselves then, they prepare and present individually but sometime, group presentation also be appreciated if the problem is of complex nature and time is constraint"*. My own experience also supports this expression because I also used to divide students in to different groups and assign different concept area for the discussion and a group leader presents the group reflection to whole class that fosters the students' interpersonal ability as well as communication skill with collaboration in group. But the problem is there to do so usually because there are large classes including almost 45-50 students in a class thus every student may not get chance to be a presenter. Two teachers said, *"Some students stay back in while presentation is planned and we have to pushed up to be in front that is difficult to manage due to time and structured course to be finished"*. This expression indicated that student's attitude and structured course are also obstacles for operationalize the performance assessment in the classroom. Teachers were agreed that students mostly concentrate on grade assigned in the assessment rather learning skills, so, all students do not contribute equally in group work assigned though *"poor students will be benefited from the group sharing and collaboration"* a teacher said. It was observed, though the performance assessment was applied in the classroom assessment, it is not planned properly for the specific objective achievement. The students' achievement was concentrated and valued for cognitive level of achievement rather achieving other skill.

**Short investigations.** In this short investigation assessment technique the student can demonstrate how he or she has mastered the basic concepts. Skill of an individual or group can access through projects that provide opportunities to work independently, writing answers to questions and then interview separately to know the learners' skill. This assessment technique can be preferred for the assessment of students' knowledge, skill and understanding about the content along with the collaboration skill in group. Though the teachers were unknown about the term 'Short Investigation', some of them were using the concept supporting it.

Collected data from teachers' interview and participant observation of the classroom directed that this technique was used partially in the classroom. Two teachers teaching content course shared that, *"we provide content for the project preparation to students in group and after submission of the work we plan individual interview about project regarding related knowledge, skill and understanding about the content"*. But practices of remaining teachers were not the same; they provided some questions for home assignment to students then collected it back for the evaluation without any interview students get grade. A teacher expressed that *"evaluating students from just observing home assignment is much difficult so I use to take reference with the written examination result"*. It shows that there is less practice of valid and reliable formative assessment in the classroom therefore they believed on written examination more than formative assessment.

**Open-response questions.** In this assessment technique a teacher can assess the student's real-world understanding and how the analytical processes relate. This assessment technique helps to assess students' synthesis and analytical power as well as connection of the context and content.

All teachers including myself were agreed that they have used open-response questions in the classroom to evaluate students' knowledge for application in real context. A teacher teaching mathematical content shared that, *"Use of open response question is very high level for learning and challenging assessment technique but our evaluation trends does not support it, though we are using it in classroom assessment practice"*. The culture of creative questioning is practiced very less from lower level. Especially, for mathematical content, students get questions exactly from book and many of them cannot solve problems if it was altered from the book or there is not provided solution by teacher. Students are a bit familiar for open-response questions for pedagogy course. A teacher teaching pedagogy related course shared his experience as, *"I teach theoretical concept first and provide context related to theory applicable on content and context on real life situation. For example, the content was 'the research in mathematics education', for instance, I had taught ethno mathematics and evaluated students providing an assignment as 'find the ethno mathematical concept practiced in your community and connect those mathematical concept to the formal mathematical content"*. Teachers shared number of such examples where students has been assessed using open response questions relating to the context of real world understanding. Using this technique, assessment really assess the learners' ability of knowledge use but teachers were agreed for the assessment tradition and students' ability creates barrier for the use of open –response questions.

**Portfolios.** It is another important assessment technique used in 'assessment for learning'. In this technique, students' learn concepts can be documented and will reveal progress and improvements as well as allow for self-assessment, edits and revisions.

All teachers had used portfolio to keep record about the students' attendance and marks/ grade achieved in assessment taken in the classroom. Actually, the portfolio can use for the student's progress report regarding learning situation for the reflection and improvement. But the actual practice is for the record of attendance and assessment marks record for the final grade provided except the behavioral aspects.

There is a provision in curriculum that five points is for the section of 'students' activities regarding internal assessment. For this section, students' activity in the classroom needs to be recorded daily as attendance for their actual learning assessment and grading students' actual ability accordingly but it is not in practice. Teachers themselves agreed with the voice of a teacher *"We keep record of the students for grade provided in three different assessments/ assignments along with attendance of the students and distribute 5 points for students' activities on the basis of other assessment grade"*. This shows that portfolio has been used partially. What was the reason to use portfolio partially was my curiosity. A teacher answered regarding the curiosity, *"Actually, it is so challenging to keep record of all learning aspects for the large class, likewise there is no practice of encouragement and motivation for the teachers who apply it with a big effort. Therefore, we keep record of student' grade related documents only not*

for learning reflection". This showed, there is less motivation on teachers to use portfolio for learning reflection. Actually, providing feedback with his/her learning evidence to the student's individual level exists very less.

**Self-assessment/peer assessment.** This is another important technique to use as classroom assessment tool to assess learning level of students. This assessment technique work when the teacher has clearly explained and provided the expectations prior to the project and then, once the projects are complete, ask the students to evaluate their own and peer projects and participation.

Out of total teacher respondents (12) from the department, just 4 teachers expressed they use self and peer assessment technique. Regarding its use, Teachers were agreed with a verbatim expressed by a teacher, *"this technique is time taking because grade providing to students cannot be finalized on the basis of students' evaluation only, teacher again need to evaluate for the students' work. Therefore, we check students' work with grading and provide paper to them for self- evaluation so that they can complain if marking is not justices"*. From my observation also, few teachers were talked and used about self/peer assessment. Teachers who used this assessment technique were during the presentation time generally. Self-assessment and peer assessment is much challenging for students though the rubrics is provided. I myself tried to involve students in self-evaluation and peer evaluation; they were not ready to do so. Students said *"I feel to provide good grade for self if a bit the quality is less and I cannot be confident to provide grade to others"* This expression says that the responsibility of the evaluation for self/peer is challenging for students. They enjoy teachers' evaluation rather friends' evaluation. Hence, teachers were also less active in this self/peer evaluation technique used minimal has been found for the classroom assessment practices of students.

**Written examination.** This is the most used assessment technique preferred for subjective or objective examination on teacher made test item. All teachers used written examination as assessment technique for classroom assessment. Teachers generally expressed that *"the assessment activity used to plan for 30 points out of 40 points in three parts so first assignment – written examination, either on subjective or both subjective and objective question, second assignment- home assignment or/and class presentation and third assignment- written examination on objective questions (almost all teachers said)"*. This expression is the common expressions of almost all teachers that indicates the intensity of the use of written examination. A teacher said *"Though students presented in the classroom about their provided assignment, I took viva based on the content, then also, I could not provide grade to the students. Finally, I conducted objective examination and provided grade according to their achievement."* What was the reason behind that a teacher could not provide grade to his/her students without written examination? The answer was so straight hat students did not believe on subjective evaluation like presentation, short investigations etc. and raised questions many times as why less grade for me? So, examination paper is a proof of the actual evaluation students can see and realize their mistakes. Many teachers and students believed on the written examination as it is being practiced for many years and the final examination tradition also on written examination form so students want to practice written examination only for the final examination preparation. Therefore, the impression of examinations tradition also constructs the teachers' and students' attitude. In this

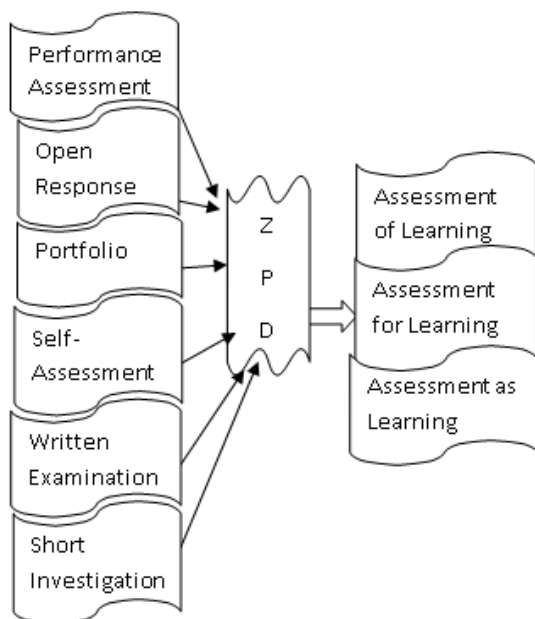
tradition, assessment activities in a new way is challenging and students also feel that written examination is only a authentic examination and result of written examinations is logical and justifiable comparing to other assessment techniques. Therefore, written examination was felt like more worthy for evaluation.

## Discussion

The classroom assessment was also focused on summative evaluation whether the formative evaluation plays the role to upgrade the learning status of the learners (Bubnys, 2019). Analyzing from the classroom perspective, proving feedback to the learners dig out the way of the destination for learning but here, in this study territory, presence of feedback found silent. Teachers focused on the written examination for classroom assessment also and used to determined students' internal grade. Assessment was used to measure the cognitive aspects only and the non-cognitive aspects were neglected. There are many ways to evaluate the learning status in the classroom (Chu et al., 2017) but teachers could not shift the assessment pattern from the written examination to others like performance assessment, portfolio, self/ peer assessment, open questioning which were the basis for the 21<sup>st</sup> century learners' skills. Self-assessment and peer assessment are the pioneer for the higher education to prepare the self-reflective learner (Thomas, 2011). To create the self-reflective learners feedback is must important which can be followed using portfolio but it is used partially by the teachers and just used as record keeping box, from where records were never gone back into the classroom for the change and improvement teaching learning.

Learning through scaffolding occurs on feedback and realization. The scaffolding used in classroom contexts refers to the interventions that tutors or teachers make within the students' ZPD (Zone of Proximal Development) to facilitate their learning and improve their current knowledge and skills (Gonulal & Loewen, 2018). Learning in higher education flourishes through connection of different scaffolding minimizing the area of ZPD. To minimize the ZPD area there is the vital role of feedback along with portfolio record which is the lacking aspects of the classroom assessment in the study territory. The relations between assessment purpose, types of assessment and the role of ZPD can be seen in the figure;

The figure face that there is a strong relationship among assessment techniques, theoretical support and assessment purpose. All assessment techniques try to enhance learning filling up the area of ZPD to fulfill the assessment purpose. Though the figure showed the strong relationship within all aspect, assessment is focused to evaluate the learners' knowledge instead applying and connecting knowledge in a





real world through many assessment techniques that creates the expected competency of 21<sup>st</sup> century.

## **Conclusion**

Classroom assessment is to be focused on improvement in achievement rather evaluation of achievement. Learner centered activities and feedback upgrades the quality of teaching and learning. Higher level learners should be creative, self-reflective, innovative as well as practical problem solver. In this context, the provided assessment grade must exhibit the real capacity of the learners but the assessment practice in our context is found too traditional achieved marks is important than skill and ability of the learners. Therefore, classroom assessment needs to rethink from the perspective of assessment as learning rather assessment of learning at higher level so that learners' ability will be inclined to be prepared for their easy survival for the knowledge society in 21<sup>st</sup> century.

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