

Investigating the Impact of Applying Different Strategies of Formative Assessments on Students' Learning Outcomes in Summative Assessments in a Private School in Sharjah, UAE

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Abstract

Among contemporary methods for improving the learning of students, formative assessments stand out amongst the most essential and powerful. While formative assessment thoughts and practices appear to have a demonstrated record in upgrading students' ability to take in information, these practices are difficult to completely incorporate into teachers' everyday classroom practices.

This study investigated the impact of applying different strategies of formative assessment practices on students' learning outcomes in summative assessments in one of the private schools in Sharjah, UAE.

This study consists of two groups of participants including twelve teachers and seventeen high school students in a private school in Sharjah, UAE. A qualitative method was taken towards gathering teachers' and students' perceptions of the formative assessment practices accompanied by open-ended questions through semi-structured interviews.

Data analysis revealed that a significant effect is achieved through using a variety of formative assessment practices on students' learning outcomes in the summative assessments. Most teachers and students are aware of the importance of using these strategies to improve the learning skills for each student. Therefore, formative assessments can be considered as a tool for improving the students' academic level, adding to the procedure and results of learning.

Keywords: formative assessment; summative assessment; teachers' experience; students' experiences; student learning.

1. Introduction

The superiority of educational assessments has been stated by a variety of important people such as philosophers, policy makers, program organizers, teachers, students, and parents for a long period of time. Teachers from all over the world agreed that there is a strong connection between using effective assessment practices, active teaching and learning in addition to measuring and providing evidence that is related to student achievement in schools. The nowadays requirement of high-stake, challenging, tutor accountability as well as Common Core Standards (2014) which had been stated by (Rose & Kirk, 2014) along with the recent superseded No Child Left Behind (2002), poses a great pressure on teachers to lead their students to achieve more.

Teachers depend on two assessment tools when assessing their students' learning. These tools are the formative and summative assessment. Formative assessment (FA) is a significant approach that permits teachers to engage the students by connecting their individual ideas, developing students' performance level, and improving students' thinking skills through specific instruction (Bell & Cowie, 2001; Coffey et al., 2011).

FA includes data collection for improving the learning of the students, while summative assessment (SA) deals with the documents that are associated with the quality of information and knowledge that the student knows or has maintained at the achievement of the sequence of learning (American Educational Research Association, American Psychological Association, & the National Council on Measurement in Education [AERA, APA & NCME], 2014). FA can be describes "activities undertaken by teachers and by their students in assessing themselves that provide information to be used as feedback to modify teaching and learning activities" (Black & Wiliam, 2010). Furthermore, it can be used as an important educational tool to provide teachers with a continuous source of the students' understanding level. In turn, this will help teachers to modify their plans and instructions to enhance the students' learning. This type of assessment can elucidate the main objective of learning to the parents and the students as well, with the purpose of illuminating and re-planning the learning methods heading towards a higher level of succeeding performance (Black & Wiliam, 2010; Sadler, 1989). It can also prepare feedback to learners with the aim of supporting learning (Falchikov 2005; Sadler 1989; Yorke 2003). As a result of that, these assessments might not be graded or might not be a part of the final grades. Many authors stated that the FA has the ability to motivate learners to study

and make them conscious about their learning and the needs to improve their level of knowledge (Maria, Magnus, Max, Håkan & Annika, 2012).

Many authors confirmed the significance of practices by sharing the knowledge through the use of FAs towards guiding instructional decision making and strengthening the belief in FA among teachers, learners, parents, and school managers. Usually the aforementioned stakeholders hold naïve opinions related to the qualified primacy of summative assessments by using FAs (Marged et al., 2013).

According to the study of Cornelius (2013), he proved that using the exit ticket, which is one of the FA methods, can improve the students' learning outcomes because it is suitable for different academic levels of students, where the teacher asks a variety of questions that can differ in difficulty. According to their responses and needs, teachers can adjust the teaching plans and strategies (Wylie, Lyon, & Goe, 2009). The planned FAs help in assessing the progression of the students by including homework exercises plus quizzes (Cook, 2009).

On the other hand, SAs are “cumulative assessments ... that intend to capture what a student has learned, or the quality of the learning, and judge performance against some standards” (National Research Council, p. 25). These high-stake assessments are used in order to gain a final result about the quality of the student's learning level (Gardner, 2010). These assessments are virtually graded all the time, and classically, there is a lesser amount of these assessments, which take place at the end of the term. There are different examples of SAs, and these examples include final performances or exams, state tests, and college entrance exams. Additionally, these assessments play an important role in determining the eligibility for significant programs such as the ones that are linked to gifted and talented education, which will lead to decide whether the student is able and willing to move to the next grade level or not. This is in addition to being responsible for assessing qualifications for awards as well as career guidance (Harlen & Gardner, 2010).

One of the most important points that are related to implementing SAs in classrooms is giving the opportunity to the students to think critically during the process of applying students' understanding in order to solve a variety of new problems or with the intention of explaining novel phenomena that take place under novel conditions (National Research Council, 2001).

In the UAE, there is a great attention concerning the standardized test which depends mostly on the students' thinking skills. Therefore, all educators have to concentrate on improving the learners' assessment abilities. In some schools, students are not usually educated to think independently (Ladsmann & Gorski, 2007). Most of the previous studies done on assessments focused mainly on one of the two types of assessments, either formative or summative assessments. There is a lack of research that explains and combines the important relationship between the two types of assessments.

1.1 Rationale and aim

The rationale of this study is to overcome the gap presented in previous studies in which there is a lack of research explaining and combining the important relationship between the two types of assessments FA and SA. This study intends to show how assessments, especially FA leads to the graduation of students with high level of critical thinking in the future.

Consequently, the aim of this research is to investigate the impact of applying different strategies of formative assessments on students' learning outcomes in summative assessments. This research will take place in one of the private schools in Sharjah, UAE. The research will be conducted through the perceptions and experiences of both high school students and grade nine to twelve teachers from different subjects by using semi-structured interviews with the intention of gaining the appropriate essential data to answer the question below:

- What is the impact of applying different formative assessment strategies on students' learning outcomes in summative assessments?

The results of the study will be evaluated, analyzed and given in tables in order to specify the importance of formative assessments in students' learning outcomes.

2. Literature Review

“Assessment literacy” indicates the essential knowledge that is correlated to assessments where teachers use and apply in their classroom practices (Mertler, 2004). This explanation might have a broader proposed definition by Stiggins which had been specified in 1991 when he stated the role of accountability testing to require that teachers head towards paying more consideration than before to the summative practices of assessment:

Assessment literates know what constitutes high-quality assessment... the importance of using an assessment method that reflects a precisely defined achievement target... the importance of sampling performance fully...extraneous factors that can interfere with assessment results...and when the results are in a form that they understand and can use. (p. 535)

Other studies about assessment literacy, agreed on the importance of implementing extra practices by the teachers are to be implemented in their classrooms regularly (Kim & Young, 2010). Assessments are about judging the quality of student’s performance as Wiggins (1998) affirmed that, “The aim of [formative] assessment is primarily to educate and improve student performance, not merely to audit it” (p. 7).

The idea of the FAs along with its practices are grounded on numerous learning theories incorporating behavioral, active use of feedback, and constructivist and cognitive approaches (Hattie, 2007). Moreover, the motivational theories that are related to self-efficacy (Bandura, 1982), and learning through self-regulation (Zimmerman, 1990). A meta-analysis of a large number of studies investigated the impact of using practices that are associated to the FAs presented an average effect size in well-controlled studies (Black and Wiliam, 1998) but it helped in the later work. This article has been greatly influential in expressing the main characteristics of FAs.

FA can be a reason behind advancing interventions towards improving students’ learning (Shepard, 2006), by taking each student’s progress into account, besides engaging their thinking using different instructions (Coffey et al., 2011). Students will think about conducting and discussing new ideas from their background knowledge (Donovan & Bransford, 2005). In order to guarantee the accuracy of these scientific ideas, teachers are responsible to help the learners in re-designing, expanding, and changing the questions into a challenging form through an appropriate scientific environment. In this case, these questions will meet the principles of contemporary learning theory, by containing the

important scientific practices (NGSS Lead States, 2013) (For instance, questioning and explanation besides arguing towards making sense of phenomena). Research studies confirmed that, in order to guarantee the correct strategy that should be applied in classrooms, teachers have to have educational program experience which will help them to enlarge their assessment knowledge. This advanced knowledge will improve the level of participation in professional dialogues along the continuum of the professional teacher (Buck et al., 2010; Talanquer et al., 2013).

Formative assessment can be a viable instructional apparatus when learners get unequivocal practice and contribution regarding their abilities to develop a case, select huge proof from various sources and comment on the validity of source material and use it for inspirations behind outlining (Gallagher, Arshan & Woodworth, 2017). FA can likewise be utilized as an approach to inform students, instructors, and guardians about the learning objective and its connection with the students of the school, in addition to what ought to be conceivable to upgrade following execution (Black and Wiliam, 2010; Dixson and Worrell, 2016).

Talanquer, Bolger, & Tomanek (2015) stated that students should be evaluated according to their shared ideas during assessments instead of focusing on the level to which learners have made sense of the topic. This type of assessment practice has a close connection to the whole teaching framework and the teacher's role as well (Black and Wiliam, 1998). Teachers have to engage students in FA practices (Buck, Trauth-Nare, & Kaftan, 2010; Kohler, Henning, & Usma-Wilches, 2008; Levin, Hammer, & Coffey, 2009; Talanquer, Tomanek, & Novodvorsky, 2013). Moreover, if the teacher increases the FA practices before applying the final term assessment, this will lead to a reduction in the level of anxiety for the students (Wang & Huang, 2006).

Applying FA tasks and working in groups will lead to positive social learning in the coming future. These recommendations arrange in a line with the social learning theory which had been confirmed by (Chickering and Gamson, 1987). These researchers confirmed the positive effect of this way by contributing and exchanging information between different group levels. This theory established by Vygotsky (1978), recommended that students construct knowledge through implementing social contexts in addition to the cooperation within social environments is critical towards better learning. Several studies confirmed that there is a close relationship between the students' approach towards learning and the assessment requirements (Marton and Säljö 1997; Ramsden 1997, 2003; Scouller 1998; Struyven, Dochy, and Janssens, 2005). Moreover, another research identified the strong link

between developing the level of performance for the students in their final exams and their FA practices (Chen and Lin, 2008; Horn and Jansen, 2009; Horn, Jansen and Yu, 2011).

Several authors worked on the experience of students regarding assessments, they concluded many goals. One of these goals is to create feedback on the performance of students with the purpose of improving learning (Falchikov, 2005; Sadler, 1998). Getting feedback is considered as a crucial component in the field of applying FA. This way might have an efficient power in improving the skills of the students in a positive way plus reducing the gap among desired and actual performance on assessments (Regan, 2010). Furthermore, students need to accept their teacher's feedback and understand the changes that they need to do towards a better progression for their learning. Also, students should understand the performance standards and the required levels and be able to connect between the results of their work and the vital standards with the necessary strategy to fix the gap (Black and Wiliam, 1998; Nicol and Macfarlane-Dick, 2006; Sadler 1989, 1998).

On the other hand, teachers need to understand the meaning of the FA, and how to apply it in a deep way in order to not fail in making positive changes towards students' performance and therefore implement fundamental re-orientation involving both them and their students.

Previous studies proved that elementary teachers had insufficient knowledge of assessment strategies to engage the students into effective FA practices (Buck et al., 2010; Coffey et al., 2011; Falk, 2011; Morrison, 2013). Through a comprehensive professional development where new ideas have been implemented, teachers will have the ability to produce a particular modification over time. These modifications will generate the key of achieving the change in the students' performance level by the use of FA practices (Black et al., 2003; Thompson and Wiliam, 2007; Nowicki, Sullivan-Watts, Shim, Young, & Pockalny, 2013).

According to the recent studies by Carrillo-de-la-Peña et al. (2011), they revealed that there was a higher level of learning, presented in some of the students' report cards which showed in their final assessment that these students participated in most of the FA activities as opposed to other students. Remarkably, numerous studies proved that participating in these types of assessments was more essential than being successful because it will lead to positive feedback which is a vital key for improving the students' performance in the future by conducting an educational strategy plan (Carrillo-de-la-Peña et al., 2009).

It is obvious that there is noteworthy corpus of recent literature on the assessments of school as crucial instrument used to measure the performance of the schools. Moreover, the studies presented in this review showed that there are various effects on students' academic and social future. Therefore, these theoretical discoveries gave the present examination the chance to explore the school formative and summative assessments from a different perspective. Moreover, allowing the researcher to examine the impact of the power of different strategies of FAs on the students' outcomes in SAs.

At long last, it is foreseen that this examination would talk about the characteristics of effective and successful instructors in the light of essential theoretical ideas, for instance, the study will investigate the positive techniques teachers implement in the classroom and how they meet the individual needs of learners, thus, showing the importance of having the capacity of watching and measuring the genuine change in the teaching practice.

3. Methodology

Qualitative study has been conducted through semi-structured interviews in order to investigate the impact of applying different strategies of FAs on students' learning outcomes in SAs. This tool is considered as one of the social interaction tools that will help effectively in the process of gathering the needed qualitative data which is difficult to be perceived, for instance the school goal and the participants' behavior at specific times besides their beliefs towards the investigation phenomenon (Fraenkel & Wallen, 2012). An instrumentation is categorized as "the whole process of preparing to collect data, it involves not only the selection or design of the instruments but also the procedures and the conditions under which the instruments will be administrated" (Fraenkel and Wallen, 2012, p. 118). The instrument which has been utilized as a part of the present examination to accumulate the required data are the semi-structured interviews. The data will be assembled through the qualitative method on the way to provide sufficient information other than significant cognizance to the investigation issue (Creswell, 2008).

The reason behind using the interpretative approach is the capacity of collecting extended information about the teachers' and the students' perceptions. These perceptions represent their explicit opinions about the assessments' skills and their impacts as well with the intention of getting the right data that will answer the question of the study through their experience. The semi-structured interview's

questions for both teachers (Appendix B) and students (Appendix C) were focused with the supporters of the examination in a guidance based school in Sharjah, UAE as specified by the requirement of the study as face-to-face interviews (Creswell, 2009) which include sound recorded questions accompanied by open ended questions.

These questions will be intended for the school teachers as a qualitative adaptable instrument, that gives them the chance to express their perspectives emphatically and to furnish the exploration with the chance to consider the reactions, keeping in mind that the end goal is to profoundly see the instructors' observations about their experience through utilizing a variety of teaching strategies in their FAs (Bell 1999). The researcher developed the questions in a way that meet the related literature and personal experiences.

This study is exploratory which means it should have a "purposeful sampling" with the intention of following the criteria of the study (Lodico et al. 2010, p. 34). As a result, high school level students were selected to be interviewed because of their appropriate age. Students who are above fourteen years old have the capacity to reflect the skills in the formal operational stage. These skills have the capability of interacting with hypothetical situations (Slavin, 2012).

The present study has an "accessible population" (Fraenkel and Wallen, 2012, p. 97) which is a subset of the whole target people, and the investigation has logical access to it (Mertens, 2010).

Two types of participants with different educational level and experience address the accessible masses of energy for this examination meaning a wider range of school teachers from different sections and a decision from different students in a private school in Sharjah. Non-probability with disproportional stratified assessing has been associated with picking the individuals in the examination to adequately address the examination masses, and to give tasteful information (Kalton 1983). Therefore, an illustration is portrayed as any social affair on which the required data is gotten (Fraenkel and Wallen, 2012), the example of the examination is picked deliberately (Lodico, Spaulding and Voegtler, 2010) from the two sorts of individuals.

The first instruction for the semi-structured interviews started by the essential demographic information, trailed by clarifications of the reason and focus of the examination, and energize data investigation (McMillan and Schumacher, 2010). This form was related to the signed school

permission in order to do both teacher and student interviews (see appendix A) along with a clear clarification that is related to the purpose of the study for both participants (see appendix B and C). In this study, two categories of participants will be involved for the aim of gathering the appropriate and required data. The first part of the interviews was with the high school teachers who teach students from grade (9-12) in both sections (girls and boys) in a private school in Sharjah, UAE.

The study interviewed (12) teachers in different specialisations such as (Biology, chemistry, physics, English, mathematics, and social studies) regarding their opinions about the research question which includes both formative and summative assessments and their practices. The assigned time for each teacher interview was about (30) minutes. One of the member instructors has a PhD in education and 13 years of involvement in showing secondary school students, also, the physics educator has a master degree in science while the other three members from the department of science have a master degree in education. Whatever remains of the educators had a four year certification in their subject (see appendix D). The participants' teachers were from various secondary school levels to guarantee the scientist to investigate the connection between the school culture and the evaluation rehearses. The interviews had been led at the school.

The second part of the interviews were with (17) students from both genders, (10 boys and 7 girls) from different ethnicities (7 nationalities). The students' interviews took place in (15-20) minutes. The two teachers and learners who volunteered to convey meets in the wake of getting a welcome from the investigator joined by an understanding from the rule of the school. The extensive variety of members that took an interest from various branches of knowledge ensured a thorough conclusion of evaluation hones in the high review levels. The interviews were directed in a well-known school in Sharjah which stood out amongst other schools in its neighbouring region.

4. Findings, interpretation and discussion

Information examination brought about the distinguishing proof of five notable themes describing the appraisal culture of the private school. We start our discourse of findings with portrayals exemplifying the one of a kind evaluation learning and best practice strategies revealed by teachers and in view of an advancing society of appraisal in the school. Then we turn to the second theme which includes the effect of applying discussions among teachers for further positive assessment results. In the third part,

we concentrated on teachers' opinions about the meaningful assessment in the eye of both teachers and students. As for the last paragraph that is related to teachers' interviews, the researcher focused on the importance of assessments in the process of learning.

The participating teachers' common values, opinions, and cooperative practices played a positive role in their assessment knowledge and understanding, but some other specific practices varied between different subjects.

All the teachers of the school are responsible for submitting a weekly lesson plan which involves the details about the teaching strategies that the teacher has to use for the topic of the week, the needed assessments, feedback of the lesson, the role of the teacher in applying teaching strategies and the role of the students towards the topic in addition to the way of connecting the lesson to real life application.

In few departments, educators additionally met as a group to evaluate tests, which brought about the request to figure out which ideas students had mastered and which should have been retaught, either to all learners or to a subset. At the point when most students missed a concept, the educators now and again chose to rework the concept. The instructors appeared to acknowledge this course of action and to acknowledge how it helped them keep up educational modules lined up with state responsibility tests, yet in addition recognized that its emphasis on institutionalization gave them less self-rule. As one educator put it,

What's more, it used to be that the teacher had significantly more, I think, circumspection in evaluation. These day...the greater part of our appraisals in...tenth grade biology, for instance, they're all the same. We, every one of the educators who instruct tenth grade, we need to educate the same assessments, because then we separate those evaluations, and we truly examine information significantly more than we at any point did.

In some ways the highlights of the evaluation culture are comparative in many sections, however watchful audit of transcripts uncovered that science, math and English teachers had a more profound and, in the meantime, more cautious comprehension of appraisal than other subjects' educators. Maybe their engagement with formative instructional practice added to a more complex comprehension of different utilizations of FAs. Ten of the 12 interviewees effectively upheld the efforts of the schools to embrace developmental appraisal inside the structure of (Formative Instructional Practice).

Most teachers, including the one who identified himself as "traditional" concerning appraisal rehearses, four utilized developmental evaluation techniques, unequivocally drawing on instructional targets as the reason for both developmental and summative evaluations, and giving students a few chances to show authority of highly-needed content. They were additionally dedicated to reflective practice, a position that propelled them to a far more noteworthy degree that was clear among educators to take part in self-evaluation and even to engage self-question.

In fact, one recognizes highlights of the way of life from the science department merits considering top to bottom: (a) the sense of duty regarding self-reflection and (b) the act of currently including understudies in the appraisal procedure. Albeit the greater part of the school educators we met offered remarks outlining how they utilized self-reflection to enhance their instructing, a couple were especially attentive with respect to the crisscross between their evaluation hones and the bigger culture of tutoring, on one hand, and the conceivable outcomes of ineffectual appraisal rehearse, on the other.

There are two quotes, one from the Arabic teacher and the other one from the physics teacher. They elucidate the former, all the more regularly communicated, estimation in regards to the estimation of self-reflection:

I may do to a great degree a remarkable lesson up at the board and assuming I'm making a great degree inconceivable appearing with respect to. Also, after that I rotate and I'm like, "okay who understands?" And they're all like, thumbs down. I'm like "okay, allowed me to have a go at something different." (Arabic)

Reliably we're constrained to consider the evaluation we will give by the day's conclusion to understand that [the learning] came through...I keep thinking, how we will check for a type of learning.... I trust it's constantly at the front line of my considerations: "Did they understand?" "What am I going to do if they did not get the concept?" (Physics)

Three teachers from different sections voiced the same question, about whether they were utilizing formative assessment correctly:

We as a whole vibe like, "alright we're doing it, yet am I doing it correctly?" That's the critical step. We need to be on the right track. We don't know how to evaluate ourselves, I presume. We're ending up great at evaluating every other person yet I don't know.... if it's correct.

To solve this problem, teachers have to have effective professional development as mentioned in the literature review by (Buck et al., 2010; Coffey et al., 2011; Falk, 2011; Morrison, 2013) and (Black et al. 2003; Thompson and Wiliam 2007; Nowicki, Sullivan-Watts, Shim, Young, & Pockalny, 2013) where they stated the importance of teachers' PD in applying active FA practices.

The biology teacher who has a high degree in education and long years of experience in teaching sciences, confirmed that her students' outcomes in the SAs are better than other teachers' who are not following the variety of assessments' practices in their teaching. She stated that:

I follow the best five formative assessments' practices which involve: firstly, the learning objectives that should be connected to real life application besides offering a clear model of the topic. Secondly, I need to regularly facilitate a class discussion and daily quizzes which all my students have to participate in. In this way I can assess them by observation. Thirdly, all students need firm, reliable feedback by all teachers and vice versa in order to alter her/his plan, instructions, and resources accordingly. Fourthly, with the aim of providing students with accurate and positive feedback, teachers have to assess students on a regular basis to make sure that the students are in the right learning aims or end product (summative assessment). Lastly, the importance of giving opportunities to organize and monitor students' work and self-assessment as well.

When we furnish students with space and time to know about their own insight and their own reasoning, learners possession increments. What's more, investigation demonstrates that metacognition can be educated. This was one of the best points of view from the participants, where she specified many of the important points that the study mentioned in the literature review. For example, the numerous learning theories incorporating behavioral, active use of feedback, and constructivist and cognitive approaches (Hattie, 2007).

Another participant cited the importance of assessing students individually with the purpose of highlighting the key points that the students has to focus on for better outcomes in the summative assessments.

I ask my students to work cooperatively, although I evaluate their work as a group but I usually evaluate their progress individually to check the student's thinking skills by using different formative practices.

This method had been identified by (Coffey et al., 2011) in the literature review.

Furthermore, the 12th grade English teacher quoted the importance of working in groups for one project accompanied by the integration with other subjects. He confirmed that this way will help the students to improve their skills socially and academically. Moreover, the teacher himself will get help in assessing his students by discussing the project's results with other teachers so they will have the chance to modify their plans for better summative assessment outcomes.

The discussion I made with the science and math teachers' helped me to assess my students positively and re-plan my formative assessment practices in a better way for my students.

This theory was established by Vygotsky (1978) and was mentioned in the literature review.

One teacher labelled the assessment practices in this way:

When I asked my students "Which way do you prefer to assess your learning?" they replied "We do like self-assessment because it will show us our positive and negative points for each lesson". Following this way, will help the students to decide by themselves the specific objectives that they need to get help with.

This way is required by the school, in which teachers have to use self-assessment for each student to estimate the student's understanding, and whether it is according to the schools standards or not. It will also help the teachers to know if they need to apply any changes in their teaching plans and assessment practices as well.

As a result, most teachers agreed with the importance of using a variety of formative assessment practices to identify the needs for each student and provide them with deep knowledge. Several teachers confirmed that these assessments offer opportunities to assist learners who were having difficulties, and to deliver a correct teaching plan for different students' levels toward better outcomes in learners' SAs as mentioned in the literature review by (Horn, Jansen and Yu, 2011). Additionally, numerous teachers talked about the significance of discussion together with effective professional developments for positive outcomes (Nowicki et al., 2012).

Student perceptions about FA practices were also explored. In this interview, students were asked questions that focused on applying individual or group assessments in class, which types of assessments they consider the best, and the effects of these assessments on their learning performance.

Fourteen from seventeen students confirmed that applying different assessment practices frequently will have a positive effect on their learning outcomes in summative assessments. Several students agreed about the importance of having self-assessments hand-in-hand with both group and specifically individual assessments will give them a clear picture about their academic needs. Three students did not prefer written assessments because of their anxiety, while the rest of the students stated that these assessments will help them in improving their understanding for the lesson's concepts by exchanging ideas and discussions.

All participants agreed that teacher's feedback has a great effect on their performance when it has been applied correctly and not in an embarrassing way.

Some students characterized the assessment practices like this:

Our teachers always apply a variety of formative assessments, I like the class discussion a lot because it helps me build a strong personality.

My teacher uses group assessments, which I don't prefer, because it makes me lose focus and some of my peers might be less serious about the task being conducted.

Group assessments greatly aid in improving my learning performance, as I get the opportunity to learn from my peers and also learn new ways of thinking or solving from them.

Individual assessments are my personal preference, and this is the method that my teacher applies most frequently (almost daily). They help me stay on task and be judged on my individual performance.

I generally favour self-assessments, which are done on a sheet of paper at the end of the lesson. I favour this method the most as it saves me from embarrassment and also gives me a chance to discuss my mistakes with my teacher, one-to-one.

I think I like teacher feedback the most because the teacher's positive reinforcement really boosts my confidence and motivates me to do my work up to my fullest potential.

As found in the previous discussion, school teachers we considered were profoundly worried about creating and utilizing powerful evaluation hones. One of a kind organizational societies intervened their choices about which practices were both perfect with school mission and gainful of learners' learning. All over the schools, educators uncovered through their remarks, an expanding level of information about the utilization of continuing formative assessments to distinguish the adapting

needs of specific students and to advise choices about instructional extension, succession, and strategies.

The development and use of rubrics, the applicability and limitations of standardized tests, the use of various grading strategies, and the need to use multiple types of assessment to accommodate students with different capabilities and learning styles. These findings are well-suited with results from two related international studies (Leighton et al., 2010; Remesal, 2011)

These outcomes addressed our exploration question in regards to teachers' and students' perspectives of vital learning inside the area of evaluation proficiency. Teachers' information went past what they accepted to be most imperative and included information about the development of tests and quizzes, the advancement and utilization of rubrics, the utilization of different reviewing systems, and the need to utilize numerous sorts of appraisal to suit students with various capacities and learning styles. These findings are well-suited with outcomes from two connected global studies (Leighton et al., 2010; Remesal, 2011).

5. Conclusions and Recommendations

All educators profoundly drew in with an assortment of assessment strategies. Practically every teacher met apparent evaluation as an apparatus for watching and making judgments about students' learning and aptitudes (Coffey et al., 2011). Additionally, educators saw themselves as steady assessors and esteemed each extraordinary sort of evaluation as an essential device for enhancing student learning, particularly, instructors who went to professional development courses about assessments practices (Nowicki et al., 2012).

As stated by many authors in the literature review, formative assessment is a tool for enhancing the students' academic level, when used correctly by experienced teachers (Gallagher, Arshan & Woodworth, 2017). It is also a way to notify the designated parties with the following steps for each learner, in addition to what ought to be feasible to upgrade subsequent implementations (Black and Wiliam, 2010; Dixson and Worrell, 2016).

Furthermore, FAs enable instructors to settle on choices about learners' learning by mulling over the substance, learning spaces, the students, setting, and readiness to utilize diverse of evaluations. FAs give data about the realization with the goal that the instructing and learning can be enhanced (Horn, Jansen and Yu, 2011). Furthermore, it gives a specific circumstance and an input for a dynamic

learning procedure to happen in the classrooms and this empowers students to figure out how to learn and to be scholastically fruitful. FAs present many advantages, for example, enhancing students' learning and helping instructors to convey the best direction to learners. Instructors ought to think about developmental evaluations as profitable, advantageous, dependable, and noteworthy. As a wellspring of restorative criticism it ought to be utilized as fundamental parts of the school's educational programs (Black and Wiliam, 2010).

In this way, our most earnest recommendation is that those with an enthusiasm for evaluation (tenderfoot teachers, instructor instructors, and to be sure, estimation specialists themselves) convey different formal and casual techniques for surfacing, focusing on, and establishing their own work in the bits of knowledge of experienced educators (O'Shea et al., 2000). Also, teachers need to go to numerous professional development workshops that will enhance their capacities in applying distinctive sorts of developmental formative assessments. These practices will prompt positive results in the SAs.

For future research, the examination should address the limitations, for example, utilizing a bigger specimen and distinctive inquiries on retest: Why did it show improvement over others? To what extent does capacity influence execution on evaluations? What other types of formative assessments will function admirably with my students?

References

- American Educational Research Association, American Psychological Association, & the National Council on Measurement in Education. (2014). Standards for educational & psychological testing. Washington, DC: Author.
- Bandura, A. (1982). "Self-Efficacy Mechanism in Human Agency." *American Psychologist* 7 (2): 122–147.
- Black, P., and D. Wiliam. (1998). "Assessment and Classroom Learning." *Assessment in Education: Principles, Policy and Practice* 5 (1): 7–73.
- Black, P., and D. Wiliam. (1998). Assessment and classroom learning. *Assessment in Education* 5, no. 1: 7–74.
- Black, P., C. Harrison, C. Lee, B. Marshall, and D. Wiliam. 2003. "The Nature of Value of Formative Assessment for Learning." *Improving Cchools* 6: 7–22.
- Black, P., & Wiliam, D. (2010). Inside the black box: Raising standards through classroom assessment. *Phi Delta Kappan*, 92(1), 81–90. doi:10.1177/ 003172171009200119.
- Bell, J. (1999). *Doing Your Research Project*. 3rd edn. Buckingham: Open University Press.
- Bell, B., & Cowie, B. (2001). The characteristic of formative assessment in science education. *Science Education*, 85, 536–553.
- Buck, G. A., Trauth-Nare, A., & Kaftan, J. (2010). Making formative assessment discernable to preservice teachers of science. *Journal of Research in Science Teaching*, 47, 402–421.
- Carrillo-de-la-Peña, M., E. Baillès, X. Caseras, À. Martínez, G. Ortet, and J. Pérez. (2009). Formative assessment and academic achievement in pre-graduate students of health sciences. *Advances in Health Sciences Education* 14, no. 1: 61–7.
- Carrillo-de-la-Peña and J. Pérez. (2011). Continuous Assessment Improved Academic Achievement and Satisfaction of Psychology Students in Spain. *Teaching of Psychology* 39, no. 1:45-47
- Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *American Association of Higher Education Bulletin*, 39(7), 3–7.
- Chen, J. and Lin, T. (2008) Class attendance and exam performance: a randomized experiment, *Journal of Economic Education*, 39(3), pp. 213–227.
- Coffey, J. E., Hammer, D., Levin, D. M., & Grant, T. (2011). The missing disciplinary substance of formative assessment. *Journal of Research in Science Teaching*, 48, 1109–1136.

- Cook, H. G. (2009). Formative assessment: Best practices part 1 [PowerPoint slides]. Retrieved from http://flareassessment.org/resources/PA_PD_Form_%20Assess_Ppt_1_rev050709.pdf.
- Cornelius, K. E. (2013). Formative assessment made easy: Templates for collecting daily data in inclusive classrooms. *Teaching Exceptional Children*, 45(5), 14–21.
- Creswell, J. W. (2008). *Research design: Qualitative, quantitative, and mixed methods approaches*. 2nd ed. London: Sage Publications Inc.
- Creswell, J. (2009). *Research Design, Qualitative, Quantitative, and Mixed Methods Approaches*: 3rd ed. California. Sage Publications Inc.
- Dixson, D. & Worrell, F. (2016). Formative and Summative Assessment in the Classroom. *Theory Into Practice*, vol. 55 (2), pp. 153-159.
- Donovan, M. S., & Bransford, J. D. (Eds.). (2005). *How students learn: Science in the classroom*. Washington, DC: National Academies Press.
- Gallagher, H. A., Arshan, N., & Woodworth, K. (2017). Impact of the National Writing Project's College-Ready Writers Program in high-need rural districts. *Journal of Research on Educational Effectiveness*, 10, 570–595.
- Gardner, W. Harlen, L. Hayward, G. Stobart, & M. Montgomery (2010). Developing teacher assessments: An introduction. (pp. 1–11). New York, NY: Open University Press.
- Falchikov, N. (2005). Improving assessment through student involvement: Practical solutions for aiding learning in higher and further education. New York, NY: Routledge.
- Falk, A. (2011). Teachers learning from professional development in elementary science: Reciprocal relations between formative assessment and pedagogical content knowledge. *Science Education*, 96, 265–290.
- Fraenkel, J. & Wallen, N. (2012). *How to design and evaluate research in education*. 8th ed. Boston: McGraw Hill.
- Harlen, W., & Gardner, J., Hayward, G. Stobart, & M. Montgomery (Eds.), (2010). Assessment to support learning. Developing teacher assessment (pp. 15–28). New York, NY: Open University Press.
- Hattie, J. (2007). “Developing Potentials for Learning: Evidence, Assessment, and Progress.” In *EARLI Biennial Conference*, Budapest, Hungary. Accessed March 11. <http://www.education.auckland.ac.nz/uoa/education/staff/j.hattie/presentations.cfm>
- Horn, P. and Jansen, A. (2009) Tutorial classes – why bother? An investigation into the impact of tutorials on the performance of economics students, *South African Journal of Economics*, 77 (1), pp. 179–189.

Horn, P., Jansen, A. and Yu, D. (2011) Factors explaining the academic success of second year economics students: an exploratory analysis, *South African Journal of Economics*, 79(2), pp. 202–210.

Kalton G. (1983). *Introduction to survey sampling*. Newbury Park, CA: Sage.

Kim, D. H., & Young, V. M. (2010). Using assessments for instructional improvement: A literature review. *Education Policy Analysis Archives*, 18(19). Retrieved from <http://epaa.asu.edu/ojs/article/view/809>.

Kohler, F., Henning, J. E., & Usma-Wilches, J. (2008). Preparing preservice teachers to make instructional decisions: An examination of data from the teacher work sample. *Teaching and Teacher Education*, 24, 2108–2117.

Landsman, J., & Gorski, P. (2007). Countering standardization. *Educational Leadership*, 64(8), 40–41.

Leighton, J. P., Gokiert, R. J., Cor, M. K., & Heffernan, C. (2010). Teacher beliefs about the cognitive diagnostic information of classroom- versus large-scale tests: Implications for assessment literacy. *Assessment in Education: Principles, Policy & Practice*, 17, 7–21.
doi:10.1080/09695940903565362

Levin, D. M., Hammer, D., & Coffey, J. E. (2009). Novice teachers' attention to student thinking. *Journal of Teacher Education*, 60(2), 142–154.

Lodico, M., Spaulding, D., & Voegtler, K. (2010). *Methods in Educational Research: 2nd ed.* San Francisco. John Wiley & Sons.

McMillan, J.H. and Schumacher, S., (2010). *Research in Education: Evidence-Based Inquiry, MyEducationLab Series.* Pearson.

Marged D. Howley, Aimee Howley, John E. Henning, Mary Beth Gilla & Ginger Weade (2013). Intersecting Domains of Assessment Knowledge: School Typologies Based on Interviews with Secondary Teachers. *Educational assessment*. Vol 18, pages 26-48.

Maria Weurlander, Magnus Söderberg, Max Scheja, Håkan Hult & Annika Wernerson (2012). *Assessment & Evaluation in Higher Education*. Vol. 37, Iss. 6

Marton, F., and Säljö, R. (1997). Approaches to learning. In *The experience of learning: Implications for teaching and studying in higher education*, ed. F. Marton, D. Hounsell, and N. Entwistle, 39–59. Edinburgh: Scottish Academic Press.

Mertler, C. A., (2004). Secondary teachers' assessment literacy: Does classroom experience make a difference? *American Secondary Education*, 33, 1–13.

- Mertens, D. M., (2010). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods*. 3rd ed. USA. Sage Publivation, Inc.
- Morrison, J. A., (2013). Exploring exemplary elementary teachers' conceptions and implementation of inquiry science. *Journal of Science Teacher Education*, 24(3), 573–588.
- National Research Council. (2001). Classroom assessment and the National Science Education Standards. Washington, DC: National Academies Press Retrieved from <http://www.nap.edu/catalog/9847/classroom-assessment-and-the-national-scienceeducation-standards>.
- NGSS Lead States. (2013). *Next generation science standards. For states, by states*. Washington, DC: The National Academies Press.
- Nicol, D.J., and D. Macfarlane-Dick. 2006. Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education* 31, no. 2: 199–218.
- "No Child Left Behind?". (2002). *Indicators*, vol. 1 (3), pp. 6-30.
- Nowicki, B., Sullivan-Watts, B., Shim, M., Young, B. & Pockalny, R. (2012). Factors Influencing Science Content Accuracy in Elementary Inquiry Science Lessons. *Research in Science Education*, vol. 43 (3), pp. 1135-1154.
- O'Shea, L. J., Stoddard, K., & O'Shea, D. J. (2000). IDEA '97 and educator standards: Special Educators' perceptions of their skills and those of general educators. *Teacher Education and Special Education*, 23, 125–141.
- Ramsden, P. 1997. The context of learning in academic departments. In *The experience of learning: Implications for teaching and studying in higher education*, ed. F. Marton, D. Hounsell, and N. Entwistle, 198–217. Edinburgh: Scottish Academic Press.
- Ramsden, P. 2003. *Learning to teach in higher education*. London: RoutledgeFalmer.
- Regan, P. J. (2010) Read between the lines: the emancipatory nature of formative annotative feedback on draft assignments, *Systemic Practice and Action Research*, 23(6), pp. 453–466.
- Remesal, A. (2011). Primary and secondary teachers' conceptions of assessment: A qualitative study. *Teaching and Teacher Education*, 27, 472–482.
- Rose Campbell & Kirk Gavin. (2014). Common Core State Standards: What's Next?. *Journal of Literature and Art Studies*, vol. 4 (11).
- Sadler, D. R. (1989). Formative assessment and the design of instructional systems. *Instructional Science*, 18, 119–144. doi:10.1007/BF00117714.

Sadler, D.R. 1998. Formative assessment: Revisiting the territory. *Assessment in Education* 5, no. 1: 77–84.

Scouller, K. 1998. The influence of assessment method on students' learning approaches: Multiple choice question examination versus assignment essay. *Higher Education* 35, no. 4: 453–72.

Shepard, L. A. (2006). Classroom assessment. In R. L. Brennan (Ed.), *Educational measurement* (pp. 623–646). Westport, CT: Praeger.

Slavin, R.E. (2012). *Educational Psychology: Theory and Practice*. 10th ed. New jersey : Pearson International Edition.

Struyven, K., F. Dochy, and S. Janssens. 2005. Students' perceptions about evaluation and assessment in higher education: A review. *Assessment & Evaluation in Higher Education* 30, no. 4: 325–41.

Talanquer, V., Tomanek, D., & Novodvorsky, I. (2013). Assessing students' understanding of inquiry: What do prospective science teachers notice? *Journal of Research in Science Teaching*, 50, 189–208.

Talanquer, V., Bolger, M., & Tomanek, D. (2015). Exploring prospective teachers' assessment practices: Noticing and interpreting student understanding in the assessment of written work. *Journal of Research in Science Teaching*. doi:10.1002/tea.21209

Thompson, M., and D. Wiliam. 2007. "Tight but Loose: A Conceptual Framework for Scaling Up School Reforms." Paper presented at the Annual Meetings of the American Educational Research Association and the National Council on Measurement in Education, Chicago, April 9–13.

Vygotsky, L. S. (1978). *Mind in society*. Cambridge, MA: MIT Press.

Wang, K. H., Wang, T. H., Wang, W. L., & Huang, S. C. (2006). Learning styles and formative assessment strategy: Enhancing student achievement in web-based learning. *Journal of Computer Assisted Learning*, 22, 207–217.

Wiggins, G. P. (1998). *Educative assessment: Designing assessments to inform and improve student performance*. San Francisco, CA: Jossey-Bass.

Wininger, S.R. (2005). Using your tests to teach: Formative summative assessment. *Teaching of Psychology*, 32, 164–166.

Wylie, E. C., Lyon, C. J., & Goe, L. (2009). Teacher professional development focused on formative assessment: Changing teachers, changing schools. *ETS Research Report Series*, doi:10.1002/j.2333-8504.2009.tb02167.x.

Yorke, M. (2003). Formative assessment in higher education: Moves towards theory and the enhancement of pedagogic practice. *Higher Education* 45, no. 4: 477–501.

Zimmerman, B. J. (1990). "Self-Regulated Learning and Academic Achievement: An Overview." *Educational Psychologist* 25 (1): 3–17.