MODERN MODELS TO IMPROVE ASSESSMENT IN HIGHER EDUCATION
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Abstract
This paper is an analysis of the crucial role played by “assessments in higher education” across the global educational system. The need for assessment has always been seen as the step towards qualitative learning, but such recognition has become more profound in the modern educational set-up, wherein qualitative education is considered as the crucial part of higher academic learning towards the long process of students’ life. Such quality is achieved when students are evaluated or assessed to ensure higher learning. Governmental policies, universities, organizations and institutes of higher academic learning all over the world are making headway in employing appropriate assessment methods, strategies, and models to raise their educational standards. Some important tools, theories, and approaches, used across the world for assessment in higher education, and which have been discussed in this paper include the Formative Assessment Theory, Learner-centered assessment coupled with Learner-centered Curriculum, Feedback Assessment Theory based on the Sandwich Approach, Embedded Assessment Theory, Berkeley Evaluation and Research Assessment (BEAR) and System Assessment among others. Such approaches show that how educational institutes are consistently improving their systems by integrating parameters that are considered as a part of total learning outcomes and which serve educational and professional purposes in the long run.

Key words: Higher Education, Assessment tools, BEAR System, Learner-centered assessment, Sandwich Approach

Introduction
Assessment is an indispensable ingredient of all study programs developed in institutes of higher education. In any such institute, it is one of the prime concerns of all administrators, teachers, and students. It tests the capabilities of students in terms of their learning and assesses whether they can apply it in the real world, ie., in their professional lives [1].
Students’ perception about methods of evaluations and assessments play an important role in the approach they adopt for learning during their study program [2]. Many students have a negative attitude towards the normal methods used for assessment and evaluations because they find them demoralizing to their self-esteem, raising doubts upon their capabilities. Therefore, all over the world, especially in the English speaking countries, there is a paradigm shift in adopting outcome-based or learner-oriented assessment methods for making higher education result oriented. The requirement for adopting assessment methods that comprise of pragmatic practices, has become more intense as Western governments want to broaden the eligibility criteria of academic institutions for admitting the students belonging to different cultural backgrounds. In addition to the focus on out-come based assessment methods, emphasis is being given to reliable learning that calls for a desirable study environment such as enabling the students for expressing their potential problems in study programs [3]. Furthermore, application of the right kind of assessment tools will also result in the production of well qualified, technologically skilled, and intellectually developed university graduates. These skilled graduates are in high demand from the employers of multi-national corporations that are relentlessly struggling to become more and more competitive [1]. Therefore, to fulfill the aforementioned requirements and adapt to these challenges, universities and institutes of high academic learning are deliberating on the issues of redesigning or employing different strategies for reforming their academic models. Very recently, the US national panel in its report recommended a dramatic reorganization of the whole educational pattern delivered in US educational institutes, not only for just receiving college education but also for imbibing the education of lasting values. In this dimension, a number of educational institutions in the US, such as the accredited institutions in Northern America, have moved towards initiating an outcome based educational framework rather than continuing on the grade-point average based educational pattern. In the year 2002, the Institute for Educational Sciences within the US Department of Education created the What Works Clearinghouse (WWC) in order to collect reliable information and disseminating the same for various educational interventions at different stages [4]. Qualitative schooling education is very crucial for higher academic learning. It lays the educational foundation for students very deeply by making their mental faculties more receptive for high conceptual frameworks, new perspectives and advanced technology. Therefore, to make schooling education more productive, sincere steps are being undertaken by the concerned departments, engaged in delivering the school education. In this dimension, to bring about the desired reforms in its different aspects, steps such as Comprehensive School Reform (CSR) have been introduced in
accordance with the scope prescribed by concerned authorities. The assumption for the establishment of CSR is that the schools are not using the best assessment practices for improving the standards of education. The desire is hence for a more instructional approach having its roots in centralized decision making [5].

Evaluation of higher education, that has its basis on deep-rooted school education, is the need of the hour. This is required for measuring students’ performance and finding out the points that could serve as guidelines for policy makers to reform it in order to fulfill the high expectations of all employers, and business persons in a global economy. Moreover, higher education is also necessary for high socio-economic development of a nation. In fact, it is considered as the engine for high developmental avenues in the new world economy [6]. Therefore, universities and institutes of higher academic learning all over the world are making headway in employing appropriate assessment methods, strategies, and models for raising their educational standards. There are three important functions of higher education namely, knowledge creation, knowledge diffusion, and knowledge innovation [7]. These institutions generate skilled work force with necessary managerial, technical, and other professional force. They also enhance their research activities by collaborating with real world enterprises in order to gain new perspectives, innovative knowledge and functional traits. The third activity, known as knowledge transfer, is practiced by these institutions primarily through teaching activities, and organization of various conferences.

To perform these functions effectively, universities and academic institutes of higher education worldwide are engaged in developing the educational quality improvement system by applying innovative tools and models for delivering their services in a best possible manner. In this perspective, a model known as Total Quality Management (TQM) has proved to be successful in raising the overall standards of higher education in reputed educational institutes. This is a very noteworthy development [8]. To become successful, an educational assessment model needs to combine the quality assurance methods and strategic management because it demands a lot of time, human resources, and infrastructural development. In order to have effective strategic management, it is important for an institution to find out varied stakeholders and their interrelationships that affect internal and external evaluations, study development, and assurance of quality. The identification and fulfillment of demands and expectations of various stakeholders ensures the success of an educational institute [9]. These stakeholders vary according to specific needs and environmental set up of any institute established in a particular country. In most countries, the list of stakeholders includes students, educationalists, parents,
industry, statutory bodies, educational loan providers, trainers, society, political framework and judiciary. These stakeholders influence the functioning and in turn the efficiency and effectiveness of the institutions for higher learning by exerting pressures through actions, intentions and policies.

Therefore, building up a model for delivering higher education that has a strong urge to satisfy all needs and expectations of its stakeholders and that which combines all ingredients necessary for qualitative assessment should be one of the foremost objectives of an educational institute. An effective assessment system is necessary for students/learners to know their learning progress in their chosen study program that in turn sets their ground for achieving highly paid jobs by acquiring necessary functional traits, skills, mental faculties, and innovative technologies that are the demands of employers of renowned multinational corporations, business persons, and practitioners of any field [10]. Accordingly, the central concern of this study is to conduct research over all the models of assessment, necessary components that make any assessment system highly effective, and efficacious feedback practices that have been developed by world renowned institutes of higher learning.

Value-added benefits for higher education have become more prominent in recent years, and many educational institutes are scrutinizing the crucial role that assessment plays in bringing about such benefits. Taking the ‘fundamental importance’ of assessment into consideration, this paper gives a broad understanding of:

i) The effort of modern educational institutes and organizations to improve the assessment procedure in higher education.

ii) The recognition of students’ assessment as the prime concern of all administrators and educators, to tally the learning outcome that serves their educational and professional purpose.

iii) Reviewing popular models such as Formative Assessment Theory’; learner-centered assessment coupled with Learner-centered Curriculum; Feedback Assessment Theory based on the Sandwich Approach’; Embedded Assessment Theory and Berkeley Evaluation and Assessment Research Assessment (BEAR) and System Assessment among others.

iv) Suggesting how an analytical middle-centric approach, in taking both positive and negative impact of assessment into consideration, can have a more positive outcome for students in their modern day studies, instead of consistently applying various models without effective assessment.
Higher education and assessment

In the modern educational set-up, qualitative education has become a crucial part of higher academic learning, since quality studies lay the foundation for students to achieve their goals. Such quality is achieved when students are evaluated or assessed to ensure higher learning with more potential to be receptive towards change and development. Hence in higher educational institutions, the process of assessing the students is therefore becoming more relevant, and many countries are using standardized outcome assessments to advance their educational standards [11]. In many countries across the world, the educational system is influenced by their governmental policies but integrating education to achieve academic freedom becomes the norm [12]. In addition to these, universities and institutes of higher academic learning all over the world are now making headway in employing appropriate assessment methods, strategies, and models to raise their educational standards [6]. There are different ways through which education can be assessed. Diversity in assessment methods in terms of both for learning and teaching methods need to be taken into consideration for the students’ development. Assessment of higher education is simply understood as the evaluation of the students by educators and the institutions as part of assessing what students have learned in the process of their studies in the educational institutions [13]. For the educators and the institutions, assessment is initiated as part of their own educational strategies that include tapping the students’ motivation, guiding their work habits and promoting some deliberate practices like making 'new knowledge and skills' to get immediately tested and applied. To understand as to what assessment embodies, many countries, institutes, and organizations have come up with different models and processes. For a start, as a part of viewing assessments as contributing towards qualitative learning among students, a new process for assessing educational system came up across Europe and is known as the "Bologna Process" [12,14]. This ‘Bologna process’ has been implemented by European Education Ministers to reform higher education with wide-ranging framework to show the importance of education in the long run. Many European countries such as Germany, France, and the United Kingdom through the Bologna process emphasize that assessment of higher education is needed for various strategies in life long process. Berkeley Evaluation and Assessment Research Assessment (BEAR) System is another tool of that brings out as to what assessment embodies or stands for. This system works towards finding the middle road in bringing out positive outcomes from under or over assessment of the students [15]. As per the BEAR Assessment System, assessment of higher education addresses certain fundamental procedures that accounts for students learning process. These include: a)
developing the perspective of the students b) matching the needs between instructions and assessment of the students from the side of the instructors and institutes and c) improving the quality of the students and the institutional programs. All these elements are designed to operate together in order to bring coherence in assessment of the students, and to apply necessary procedures to deal with the outcome of the result. The Berkeley Evaluation and Assessment Research (BEAR) Center Assessment System has been used to develop ‘embedded system’, of assessment in order to integrate and systematize the learning system inside the classroom atmosphere [16].

According to this, assessment necessarily does not mean that it should only be a long term formal assessment in the end; but it also means an embedded assessment, where learning and assessing activities becomes embedded inside the classroom procedure, in the form of "homework assignment, a laboratory procedure, a classroom discussion, an essay [writing procedure or competition]", etc [15]. This embedded assessment allows classroom task to become a part of learning process. The BEAR Assessment System in the embedded assessment helps develop the graduate towards specific development of curriculum assigned to them [17]. The ‘Formative Assessment Theory’, that addresses the importance of students giving their best performance during the time of assessment, also explains what assessment means for students or to the institutions. This theory emphasizes ‘maximum performance’ that could be attained by constructive collaboration between a teacher and student [18]. Formative assessment, that can be either formal and informal types, emphasize the activities of a student and a teacher, regarding the assessment of a specific curriculum, and the assessments that is considered in the course of events but not specifically mentioned in the curriculum design respectively. Assessment also allows effective ‘Feedback’ to be given back to the students, and this feedback in turn works for their learning development.

Feedback makes students understand their strengths and weaknesses in their field of studies [13]. For any noticeable negative outcome, remedial action can be taken up for the same. Assessment also creates transparency in a sense that, instructors or educators are able to maintain relationship with the student to guide them towards better performance and grasp opportunities. Institutions and instructors holding assessment make the students to aim for excellence as a team. Through assessment, students are consistently expected to strive to develop their knowledge, skills, and quality of excellence. Often when students lack key information on how their education and professional lives will go down, it is due to the lack of insight on the part of the educators or instructors who would have failed to give them insight on their
Formal assessment of the higher education is therefore a core assessment that many educational institutes use in order to measure the learning outcomes of students [20].

**The need for assessment in higher education**

The irony of studies since history, or more importantly in recent times, is that many students come in with the prerequisites grades and the right syllabus to start a new course, but they always end up without knowing for sure as to what they are supposed to know or imbibe for the long run. Thus, many students end up in the 'pass-the-bucket' list when they are assessed. When strict formal assessment and rigorous imparting of education that emanates from it, are not pursued consistently, students always end up as "didn't study enough, didn't remember enough, was not interested enough" [15]. Taking such opinions into consideration, it can safely be said that assessment of students is required in higher educational learning. Assessment is necessary because it allows students to express their potential and qualities, and such assessment would eventually tally up to the outcome of their learning that serves professional purpose in the life-long process [3].

Higher education assessment is necessary in order to ensure that students take part in all strategic educational activities in order to enhance their mobility in learning and future career. Assessment makes institutional administrations, educators, and the students to know what has been learned so far, and how challenges in terms of imbibing quality education can be assessed [21].

Higher education assessment allows much purpose to be fulfilled such as:

a. Designing faculty development plans to make the students to excel;

b. Determining the outcome of the students learning and measuring the positive and negative elements.

c. Making changes in imparting-learning procedures depending on the outcome of assessments [19].

Higher educational assessment also allows challenges and difficulties, encountered in imparting-learning process to be tackled by the process of formative assessment. Formative assessment is understood as allowing students to modify themselves through teachers’ insight during the learning procedure. In brief, it refers to the involvement of students in the assessment and learning practice. To improve the learning individually as well as collectively, formative assessment
forms a process of dialogue and collaboration between teacher and students [22]. A study carried out among graduates suggests that higher education is necessary since it generates cultures of excellence among the students [13]. It enables them to prepare for delivering good educational excellence and aids their professional development.

Assessment of students is required time and again as the society has entered into a period where all social and economic developments are dependent on educational attainment. In other words, the heightened global competition and the rise from unskilled to skilled labour activities have given rise to the need for assessment.

The 'culture of excellence' in modern days demands the assessment of higher education to improve their performance at every step.

**Recent changes in higher education across the world, the induction of ‘assessment’ as core fundamental principle**

It is extremely important to take the recourse of appropriate models for improving the assessment in higher education. But it can prove to be a half-hearted effort for raising the overall standards of higher education until and unless, required attention is paid to issues such as clear-cut designed syllabus, availability of prescribed study material for completing it, monitoring the learning process, and devising proper ways to improve the student’s retention, transfer, and application of the knowledge [23]. These issues could result in certain problems such as practicing incorrect skills, misunderstanding of the concepts of any subjects in a proper manner, etc. In addition to these issues, other elements for improving higher learning play an effective role in employing the models for filling the lacunae existing in higher education. The main ones among them are timely feedback and regular revision of students’ progress in congruence with the objectives of learning [24]. In this perspective, a comprehensive model known as BEAR Assessment System is currently being used at University of California in developing ‘Embedded System’ of assessment [16, 17]. The special features of this model consist of all tools such as existing tests, exams and writings necessary for monitoring, interpreting and evaluating students’ performance. It is also useful in assessing the performance of a class with large number of students. Another theory that could be useful in raising the mental faculties of a student is the ‘Formative Assessment Theory’ that addresses the following purposes namely, to provide the credit for what has been done and to correct the errors that has been committed by the student. The crux of this theory is ‘maximum performance’ that could be attained by constructive collaboration between a teacher and student. Formative assessment could be of formal and informal type. Formal assessment includes the activities of a student and a teacher regarding the assessment of a specific curriculum while
informal formative assessment refers to the assessments that is considered in the course of events but not specifically mentioned in the curriculum design. In this theory too, regular feedback, that is highly informative in nature for the students, plays a very important role in measuring its effectiveness [18]. In the current scenario, where countries are attempting to stay abreast of the technological advancement that demands better academic qualifications at competitive prices, methods of assessment for higher education are too changing very rapidly. Moreover, assessment methods also depend on the diversity of population of students at different levels in a country, part-time students, and students belonging to non-traditional background. Another consideration in this facet is the countries in which political leadership wants to widen the horizon of higher education, especially, for those students who either do not have or possess little access to the institutes for higher learning. Therefore, these complexities all over the globe demand urgent and desired attention on designing the methods for assessment. Thus, traditional learning and assessment is no longer considered as being the only answer towards building educational standards of the students. Many countries like the UK and the USA has been developing higher education models known as the “fit-for-purpose” as a part of quality assessment of students [25]. In studies taken up by Berger on the South Africa’s educational system, it is argued that even in developing countries, “fit-for-purpose” remains as a positive step towards aligning education to output consequences after the learning-educational process. Increasing educational standards as well as rise in students’ diversity make institutes to aim for developing their potential in addressing the students’ need as to where they fit in their learning and career development [26]. In the international platform, almost all educational institutes and systems are now looking for means to increase the academic standards by using the assessment tool in a stable and appropriate way. Apart from increasing the quality of learning and education, it allows the students to develop where they fit with respect to their career and professional choice in later life [27].

In relation to this, it is also necessary to consider that while designing the assessment methods, other methods such as the learner-centered assessment (LCA) along with learner-centered curriculum (LCR) also gives goods results in raising the standards of higher education [28-30]. ‘Learner-centered assessment’ helps in emphasizing learner’s (students) responsibility in taking learning to their own stride and in fostering learner’s commitment to learning. The institute becomes the instrument in accessing and knowing the performance of students. This makes the students to become more involved through participation (practical) in the learning system. To come up with a centered assessment method,
institutes needs to come up with tools and processes. These tools will allow greater emphasis on the students’ capacities to learn the course curriculum and its use in live situations of the real world rather on employing traditional tools such as routinized written exams and unseen exams. This LCA is believed to get affected on the side of the teachers when they engage students on a higher overloaded scale, since small groups are easier to assess. The methods designed for assessment should be cost-effective and efficient according to the staff-time availability and from the learner’s point of view it should be developmental, manageable and relevant. There should be an opportunity for students for writing a reflective account. This activity will help the student to review their experience of learning program and to provide a way for their professional development in the future. Such ‘learner-centered assessment’ also encourages the ‘learner-centered curriculum’ for continuous curriculum improvement. The ‘learner-centered curriculum’ helps in developing curriculum learning development, critical thinking, innovative practice, skill development, becoming more mature and responsible, etc. among students. Students manifested in the ‘learner-centered curriculum’ find more positive development towards professional lives in the long run.

Despite many efforts made, without effective feedback system, it remains impossible to design assessment system because of the intricate relationship that learning and feedback system shares. In fact, while “feedback is widely acknowledged as the crux of a learning process” [31], effective feedback system is supposed to be the heart of the whole learning process. Effective feedback system assists the students in understanding the expected standards of learning that assessors want from them. Therefore, feedback should be taken frequently with enough details and its focus should be on student’s performance in a progressive manner rather than on student’s characteristics. In addition to it, assessor should ensure that the student has understood his performance and in the same way that assessor intends to convey it to the student. Feedback remains as the most effective tool in bridging gap between students and teachers [32]. But, more often than not, the institution’s staff and assessors face the dilemma of providing the feedback and realities of motivation of students because students are primarily motivated from their final grades in exams rather than from the feedback system that provides them an opportunity frequently for learning from the mistakes they had committed in formative stages of any subject. In fact, students are supposed to be strategic workers because, if they know that a particular piece of work will not be checked by the teacher or assessor, they do not work on it. Therefore, in this situation, assessors need to allocate some percentage of the total marks for these kinds of assignments. Another difficulty that takes place in designing
the good feedback system is that students are not fully prepared to accept the same whole-heartedly because they face
difficulties in its interpretation [24].

By keeping all these facets in the sincere consideration, it is imperative to take the recourse of good practices that are
currently being practiced in the world’s renowned academic institutes such as Harvard. Feedback system based upon the
practices such as ‘Sandwich Approach’ is very effective. The sandwich approach, along with other integrated work and
study schemes, are now being increasingly advocated as a key means by which universities can promote students'
employability. It refers to sandwiching the negative feedback between the sets of positive feedback so that students accept
it happily and try to improve the mistakes that they commit in the learning process. The sandwich approach helps
facilitate learning and development more effectively since it helps in giving positive and practical feedback to the students
that brings changes in their learning attitude and potential [33].

Models and Approaches of Assessment used by Educational Institutions in the Past and the Present

In the above mentioned perspective, a very important question arises. It relates to the selection of particular feedback
system in any institute for higher academics. Any system that functions in a particular environmental setting depends
upon the subsystems or subparts that constitute the whole feedback system. Application of the System theory that pays
required attention on the role of subsystems and impact of their functioning on the whole system is very appropriate in
analyzing the suitability of particular model. In this theory, each subsystem is analyzed separately in addition to the study
on interaction that takes place between subsystems. Cross-sectional approach is required to study the interaction between
sub-parts and developmental approach is needed to analyze the change that takes place in a system over a given period of
time [34]. According to general system theory, feedback constitutes the structural part of the two subsystems that operates
in a large system. As structural part, it operates within two subsystems, namely, teaching process and assessment that in
turn operates in a large system known as study program comprising of learning, assessment, and teaching processes
(strategies, teaching methods, and feedback). Therefore, as per the general system theory, little change in the feedback
process will have an impact on both subsystems, viz., teaching and assessment as well as interaction. With reference to the
subsystem of learning, students who study the particular subject according to their choice, constitute the crucial ingredient
of this subsystem. Therefore, different learners have different kinds of motivations, their prior experiences, and unique
ways of learning that significantly influence the study process and level of their advancements. In the same way, the other
subsystem, that is, the teaching process comprises of following programs such as strategic plan for the development of higher education in accordance to which study process will be directed, various study programs, and qualified teaching staff that has the suitable teaching philosophies aligned with strategic advancement of an institution.

On the other hand, another subsystem known as assessment, that has varied objectives like ranking the students on the basis of their performance and measuring the level of educational advancement of a student for his promotion to the next level of the study, could also be parted in two types of components namely, formative assessment and summative assessment. The classification of these assessments depends upon the purposes they want to achieve according to the institutional setting. Formative assessment has the purpose of assessment of learning while summative assessment is meant for decision making. Application of both these assessments depends upon the context and the institutional setting of an institute because each institute has its own history, cultural, unique administrative settings, and set of values that it wants to promote for creating its unique place in the realm of academic learning. In addition to this factor, employment of appropriate feedback system also depends upon the skilled work force, financial resources, and the level of technological advancement that the institute has already achieved. Therefore, before devising the feedback system, it is required to analyze these factors in addition to the psychological factors that play a vital role in motivating the students.

Psychological research has proved the fact that the way persons want to see themselves is quite different from the way others observe them [35]. It means people make positive perceptions about themselves with respect to their capabilities that is, in fact, sometimes opposite to the perception and image made by other persons about their capabilities, and mental faculties. This psychological reason is very important in devising the feedback because students react very emotionally and therefore do not want to accept the critical and negative feedback that is conveyed to them by assessors.

**Advantages, Shortcoming and, Challenges of the assessment of higher education**

Feedback system or assessment of higher education tools should be devised in such a way that it could motivate students in receiving the critical feedback and learning constructively from the mistakes during learning process without losing their faith upon their capabilities and self-esteem. In order to do away with shortcomings and challenges, feedback or assessment system, in addition to having other properties and useful practices, should have self-regulation as a special feature. Self-regulation encompasses several dimensions of learning process and manifests itself in several ways in practice. In terms of learning process, it comprises of different aspects of students’ thinking and analyzing, their behavior,
Feedback system allows the active manifestation of many different approaches of the students during the learning process, like being able to understand feedback in positive stand, and set up their goals and profession during and after their educational accomplishments [34]. As part of this feedback development that encompasses the students, as well as the peer and the teachers, it has been brought out that the 360 degree (all round angle - students-peer-teachers) assessment is an effective systematic implementation for bringing a developmental change in educational system. When combined together, the interactive feedback mechanism in this approach helps to enhance the learning of the students and in getting holistic approach towards their learning development. Apart from the all-round feedback assessment approach, self-regulation feedback also necessitates students to develop their learning, in setting goals, and in making changes. Students in this case, start to take control of their learning and become self-regulated learners [34]. In terms of advantages of assessment system, those students who practice self-regulated assessment successfully interpret the external feedback given by teachers and other external assessors with respect to their internal goals. Concept of self-regulation believes in reforming the motivational beliefs and overt behavior. To facilitate self-regulation, there are some conditions that need to be created by the institutes. These conditions are, to clarify to all the students, the criteria for defining the word ‘Good Performance’; second, to deliver qualitative and motivating information to the learners about self-regulation, and third, to encourage a constructive dialogue between a learner, teacher, and peer group, and to provide feedback about the way in which a lecture has been delivered by the teacher to class of students [35]. One reason why this self-regulated feedback assessment remains successful is because, students are already assessing their work during the learning process and this makes them easier to generate their own feedback. This approach offers easier ways to the teachers and institutes organizing students’ assessment. In the recent years, in terms of developments in the realm of self-regulation model, various models have been developed with respect to theoretical and empirical premises and varied focuses such as volitional, socio-cultural, and cognitive issues [36].

Based upon these models, there are many instruments for measuring the self-regulation assessment program such as Self-Report Questionnaire (SRQ), observations of over behavior, interview evidence, think aloud protocol under which a learner reports about his feelings, and thoughts, and self-regulation techniques while solving any problems or completing the task given by the assessor. Think aloud protocol technique is highly advantageous because it provides immediate opportunity to a student for registering his feelings, and thoughts rather than recalling them on later stage or after
finishing the task. In the same way, under self-regulatory assessment, class interventions strategies change significantly [37]. These strategies can be classified into three categories namely, Cognitive-behavior modification program, teach directly to develop skills and strategies, and the socio-cultural theory [13, 38, 39]. Under the first category, intervention programs such as Stress Inoculation Therapy pays attention to the student’s directing and maintaining attention and modulating the student’s anxiety or stress level [38,40]. The second category focuses upon intervention strategies namely Academic Strategy Instruction that is in favor of providing different kinds of training modules for instructing the students for memory support strategies[13]. The third category namely, socio-cultural theory has many class intervention techniques such as ‘Apprenticeship in Activities that develop Subject-matter’ [39]. Under this program, students receive the knowledge from the teacher for methods of thinking about academic work and also question the assertions and present arguments that enable them to think like a subject matter expert.

In addition to these intervention strategies, in recent times there are other techniques that are being used by the institutes for higher learning. In fact, these strategies have their focus on bringing about structural or comprehensive change in entire schools and in the systems in which these institutions are embedded. For instance, these programs want to create the ‘communities of learning’ that function beyond class rooms in which both teacher and student behave as learners. These kinds of constructive practices if supported by the teachers and institute’ administration produces cumulative results. By practicing these strategies under self-regulation program, teachers or assessors are able to know the changing psychological needs of students and use them to bring about required change in instructional methods. Thus, this kind of assessment method requires participatory learning in which both student and teacher share their ideas, knowledge, potential problems related to study program.

**Conclusion**

For analysts such as Wilson and Scalise [15], higher educational assessment has the capacity to improve or hinder the learning procedure of the students. Taking the negative impact into consideration, when students are over-assessed, it may contribute to them becoming underprepared and underperformed in the face of evaluations or assessment. The process of assessment and the negative or positive outcome that it embodies does not only depend on the institute or the administrators and educators, but it also depends heavily on students’ ways in adapting to the methods and evaluations system of assessment. Thus, although institutions, administrators, and educators emphasize such assessment and look
Padma Thiagarajan*et al./International Journal of Pharmacy & Technology
towards it as improving their education and professional lives in the long run, many students deter such notions. Many students also feel that assessment demoralizes their self-esteem and raises their doubts about their capacity to excel in their studies. Keeping this in mind, many of the English speaking countries has gone for paradigm shift system by adopting outcome-based or learner-oriented assessment methods to make higher education more result oriented. It is true that assessment is necessary because it allows students to express their potential and qualities, and such assessment eventually tallies up to the outcome of their learning that serves professional purpose in the life-long process, but at the same time, over-assessment of the students should be ruled out to avoid stress among students. However, it cannot be denied that in modern educational system and more so in higher educational system, assessment of the students has become the prime concern of all administrators and educators. Thus, educational evaluations or assessment that impacts the institutional syllabus and programs are conducted either internally or by state, by country, or even by international bodies. This assessment helps the students not only to develop a sense of have positive achievement, but it also facilitates the institutions to improve their own standards of teaching in the long run.

Given the fact that there are both positive and negative opinions on whether higher educational assessment is required, this aspect remains a topic of debatable research. Future researchers can weigh both the sides by taking the views of institutions, administrators, educators and the students. As discussed, paradigm studies by the English speaking countries, based on outcome oriented learning, is an important aspect to consider. ‘Using innovative technological tools’ will also help to analyze the assessment of higher education to fit into different professions as per the students’ qualities, capacities, and skills.

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References


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