

## **Teachers' perception of Classroom Assessment Techniques (CATs) at Higher Education Level**

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### **Abstract:**

*This article is based on a study to examine the perceptions of a sample of teachers about Classroom Assessment Techniques (CATs) at higher education level. Classroom assessment techniques basically integrate assessment in teaching to enhance students' learning. In Pakistan, the use of classroom assessments is mostly restricted to assessing the extent of students' retention or memorization even at higher education level which is an alarming situation in our educational institutions. Teachers use assessments basically for grading students. A survey questionnaire was administered to 54 teachers from three public sector universities and three private sector universities of Multan. The data were analysed by calculating mean score for overall level of agreement / disagreement for each statement. Gender-wise, Sector-wise and faculty analyses of teachers and students were also made for the comparison of level of agreement by using z-test. It was found that respondents viewed that the basic purpose of classroom assessments is to prepare students for examination. Students are interested only in those assessments which contribute to their grades/GP. Such an attitude promotes rote-learning instead of deep learning and higher order skills. The study recommends that it is the demand of time to train our teachers to reap the benefits of CATs to make our students self-sufficient, self-dependent, self-motivated and problem-solving individuals.*

**Keywords:** Classroom Assessment Techniques (CATs), Teachers, Students, Higher Education Level (H.E), Deep learning, Rote learning.

### **I. Introduction**

Assessment is a term widely used in education. Mihram (2014) is of the opinion that the term assessment is originated from the Latin word '*assidere*', which implies, 'to sit by' (e.g., as an assistant-judge or assessor, originally in the perspective of taxes). Therefore 'in the assessment of learning', it means 'to sit with the learner' and do assessment *for* and *with* students and not *to* student. According to Conner (2003) if this word is combined with education which traced back to the Latin term '*educare*' which means 'to bring out', educational assessment can be viewed as having sit by the learners, expose the ability they possess and provide them an opportunity to display their native potentials.

Assessment is at the core of an influential teaching and learning environment. If we intend to discover the reality of an educational system, its assessment procedures must be

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examined. Black & William (1998b) outline assessment as strategies which include activities which are undertaken by students and teachers in order to get information which may be utilized analytically for modifying learning and teaching. Glaser (1990) suggested that assessment must be exercised to reinforce learning instead of just indicating current and previous achievement. Assessments must take in account learners' capacity to make use of knowledge and skills that were being learned.

Earl (2012) outlines following three patterns of classroom assessment which comprise:

1. Assessment *of* learning
2. Assessment *for* learning
3. Assessment *as* learning

Assessment *of* learning focuses on the degree of learners' performances on a particular task or at the end of a unit being taught. Our education system generally focus on assessment *of* learning or Summative Assessment. Summative assessment is used for grading and reporting students' learning progression. Angelo & Cross (1993) are of the view that summative assessments definitely have a purpose and a place in our system; however, they remain unable to diagnose learners' needs as the learning reveals or offer day-by-day or minute-by-minute feedback which is required to design significant instructional judgment.

Assessment *for* learning is an essential part of the teaching-learning practice which manifests the belief that all learners can improve. Black et al. (2003) are of the opinion that assessment *for* learning means 'any assessment which primarily aims to serve the purpose of stimulating students' learning. Assessment *for* learning comprises the function of assessment which is identified as formative assessment. However, its scope is wider as it also contains evaluation and diagnostic assessment. It centers at learners and emphasises on assessment to be a meta-cognitive activity for learners.

Assessment *as* learning focuses as to how learning occurs, and is illustrated by learners exposing their own learning and drawing adjustments in order to achieve deeper knowledge. Dochy (2001) expresses that assessment does not only refer to measuring, but it also focuses on the involvement of learner, application of skills and knowledge, addition in the learning environment, construction of knowledge instead of reproduction of knowledge in actual practices. Hence, students are considered independent, self-sufficient and exploring entities that can regulate their own learning practices. As a result they depend more on themselves and less on their teachers. This concept of assessment shifts the responsibilities from teachers to students and directs towards a paradigm of sharing responsibilities between teachers and students to assess the progress of students. In Assessment *as* learning, the role of the teacher involves planning assessment and instruction which make learners monitor and reflect their own learning. This view claims to think *how assessment can be used* for the success of the student, instead to think *how success of students can be assessed*. (Stiggins, 1999).

Traditionally the emphasis of classroom assessment has been on the assessment *of* learning. Teachers also use assessment *for* learning to build in diagnostic methods and provide feedback at different stages in teaching-learning process, though it often remains

implicit and informal. Assessment *as* learning in which students turn out to be significant analysts of their individual learning is rare.

#### **A. Classroom Assessment Techniques (CATs)**

Classroom Assessment Techniques (CATs) have been regarded as strategies to monitor students' learning in the literature of North American higher education. "Assessment" in this paradigm does not imply graded exams, but rather a set of teaching tactics aimed at enhancing the quality of students' learning. Besides "Classroom" does not stand for secondary school but rather for in-class activities (tutorials, lectures, labs) in higher education. Steadman (2011) takes classroom assessment as an innovation and says, "Classroom Assessment is an educational innovation that unites efforts to improve both teaching and learning. Classroom Assessment also involves students in active mental processing of new information and makes them more aware of themselves as a learner."

Classroom assessment techniques basically integrate assessment in teaching to enhance students' learning. These techniques work as assessment *for* learning and are Formative in nature. Classroom assessment techniques help teachers to concentrate on students' learning instead of focusing on their own way of teaching. They shift teaching approach from teacher-centered to student-centered. By making an effort to find out what is learnt by students and what remains unclear, teachers can easily satisfy the students' requirements by improving their learning. The chief aim of classroom assessment for teachers is better understanding of their students' learning and improving their teaching methodologies.

Thomas Angelo and Patricia Cross' book *Classroom Assessment Techniques: A Handbook for College Teachers* (2<sup>nd</sup>) is considered to be the model text on Classroom Assessment Techniques (CATs). This handbook-style text elaborates on the concept of "Classroom Assessment Techniques," a term used by the authors to refer to alternative methods of evaluating or assessing students' learning. They discussed and registered fifty (50) assessment techniques that may be applied in the university classrooms to promote keen learning and to enhance quality. The book provides a wide variety of techniques, and the user is able to find several applicable techniques for a particular educational situation. According to Angelo & Cross, (1993) CATs are basically, non-graded, anonymous, in-class activities and are mainly feedback strategies which help teachers in finding out how well, how much, and what is being learnt by their students. Moreover they are pre-planned activities that allow teachers to get useful and immediate answers to questions, teachers wish to know about their students' learning and promote a systematic method of conducting informal assessment on continuous basis.

According to Steadman (2011) CATs are a boon for teacher and help teachers to get their students satisfied by enabling students to express their issues related to their difficulties in learning. They help teachers involve in reflection and organisational changes in the environment of classroom and make teachers' task easy by promoting students' involvement which leads to improvement in learning. According to Mihram (2014) following ten assessment techniques present a sampling of CATs to start with. These ten techniques are to assess Course-related Skills and Knowledge. Their details are given below.

### **B. The One Minute Paper**

The teacher ends the lecture a few minutes before time and make students write down short answers of these questions: What do you think is the most important point you learned today? "What according to you is still confusing? It allows teacher to assess whether their instructional objectives match students' perceptions of these objectives and their self-learning or not. Moreover, a teacher can gather knowledge about their difficulties in learning. This task enables students to assess information and to get engaged in recall.

### **C. The Muddiest Point**

The teacher makes students answer the question as: "What do you think was the muddiest (confusing) topic in the lecture? This technique enables teachers to get quick feedback on what students think most confusing or least clear. This feedback helps teachers decide what should be more emphasized and how much time should be spent on these topics. At the same time students also speedily judge what they find unable to comprehend and become able to express their confusion.

### **D. Background Knowledge Probe**

This technique aims to gather feedback about students' previous learning. Background Knowledge Probe are easy and short questionnaires. Teachers may design them at the beginning of a new unit or lesson, before introducing a new course or at the start of a new topic. The teacher may ask students to circle the correct answers of multiple-choice items, to write down short answers or both.

### **E. The One-Sentence Summary**

After completion of a topic, the teacher asks students these questions: "Who does what to whom, when, where, how and why"? Students are supposed to answer these questions into a single sentence. The teacher gauges the competency of students in summarising a large material completely and briefly. Students exercise the skill for reducing facts into smaller, interrelated bits which can be recalled and processed with quite an ease.

### **F. Directed Paraphrasing**

The teacher makes students paraphrase a portion of a lecture for some particular purpose and viewers in their own words. It allows teachers not only to observe students' perception of a given information but also their skill for converting this specific information into a kind which can be understood by particular viewers, apart from the students and teacher.

### **G. Student-generated Test Questions**

Teacher directs students to write down two or three possible test questions along with correct answers. It helps teachers judge what students perceive as the most important or memorable material in the lesson. It also helps students decide as to what are useful and fair questions for test, and how satisfactory they may response to these question which are modelled by them. Answering to this CAT, allows students to assess how appropriately the topic is understood. Moreover, the feedback helps them to re-think their learning.

### **H. Application Cards**

After introducing a principle, theory, procedure and generalization, the teacher distributes index cards to students. He makes them mention at least one possible real-world

application of what have been learnt right now. This CAT helps teachers determine rapidly whether their students comprehend the applications of what have been learnt just now. The teacher directs students to connect fresh learning to the previous knowledge.

#### **J. Paper or Project Prospectus**

The word "prospectus" represents a brief, organized first-draft proposal for a term project or term paper. The "Paper Prospectus" encourages students to think through components of the assignment such as the purpose, topics, proposed audience, major organization, key questions to be answered, and resources and time required. This CAT evaluates the proficiency of students to synthesize what has previously been learnt about a topic when they design their personal projects. It may offer the teacher not only the beneficial evidence about learners' comprehension of assignment but also about their skills in planning before it may be too delayed to amend. .

#### **K. Pro and Con Grid**

The teacher directs students to enlist pros and cons of a certain issue or topic. The purpose of this grid is to provide faculty with a synopsis of an analysis of the pros and cons as drawn by students. This technique forces students to go into the very depth of their learning, to search for the advantages and disadvantages of the issue, and to evaluate the value of challenging claims. It also provides significant evidence about students' profundity, scope of their analysis and their objectivity.

#### **L. Analytic Memo**

The analytic memo is chiefly a simulation application. It makes students write down an analysis of some particular issue or difficulty in one or two pages. This memo is written for a person who is usually recognized as a client, a stakeholder or an employer who requires the analysis of the student for making decision. This CAT evaluates the skill of students for analyzing given issues by making use of precise methods, techniques and approaches.

#### **M. Conceptual Mapping**

Students make diagrams and drawings to show the mental connections between a key concept and other related concepts they have learnt. Being able to explain and document the connections among various concepts, helps them recognize their ability to engage in complicated thought practices. Teachers may locate the connections in order to understand mistakes in students' thinking manners.

#### **N. Learning Theories to Support CATs**

Kelly (2005) is of the opinion that the concept behind using CATs to check students' learning supports Adult Learning Theories, Constructivist theory, Deep Learning and Experiential Learning. CATs promote students to reflect on how and what they are learning, to construct their own knowledge, to connect their own learning to their experiences, and to proceed toward a self-directed attempt to learning. Constructivist learning theory focuses on individuals' making sense of their own experience. According to Jarvis (1998) learning is considered to be constructed by the student instead of being received from the teacher. While learning a new thing, students make efforts to comprehend the new facts as it is related to other things they know already. Hence, the role of individual learner is central. By enquiring students in the very early stages about what they have learned, provide them with an opportunity to think of their comprehension of the

new information they have recently learned. It is probable that misunderstandings may take place or there may be certain confusion in learners' mind as what is just learnt, doesn't get "fit" to their previous experience. By making use of CATs, a teacher can promptly judge how students have understood what they have learnt and may take some remedial action to assist students' learning.

One of the objectives to use CATs is to support students to acquire ability to self-assess and to monitor their own learning progress. Moreover, they keenly construct their own learning by responding to the CATs and by discussing feedbacks with the teacher. CATs also support Meta-cognition which has been defined by King (1999) as "thinking about thinking" and is a complicated type of higher-order thinking. It involves the capacity to think about own cognitions, and to discover how to learn, to analyze, to reach at conclusions and to practice what has been learnt.

#### **O. Classroom Assessment in the Context of Higher Education (H.E) in Pakistan**

In Pakistan, process of assessment mainly emphasises on assessing students through examinations and tests which are conducted at several phases of education. Such traditional examinations are basically summative in nature. These examinations compel teachers to complete syllabi as soon as possible and hence they prefer to cope with syllabi rather than to get engaged in classroom assessment. Teachers use assessments basically for grading students. On the other hand, students in general, are interested only in those learning outcomes which enable them to get good grades in examination. They do attach a little importance to classroom assessment techniques. These techniques promote students' learning but they are not yet generally used.

The Higher Education Commission (HEC) of Pakistan has taken steps to improve teaching and learning process to ensure the quality of higher education through result oriented education and dynamic learning. It calls for not only continuous assessment but also students' involvement. Quest for the quality demands efficient teaching practices, effective assessment and sound learning. Assessments can become a dynamic element in efforts to promote education. We cannot draw optimum benefits from them if we make use of these techniques only for ranking students and schools. We have to help teachers change their way to use results of assessments, focus on improving the quality of classroom assessments and plan assessments to achieve learning objectives. When classroom assessments are made an integral element of teaching process and teachers consider it their primary concern to make every effort to help their students in learning, the advantages of assessment for both teachers and students will be unlimited (Guskey, 2003). By making an effort to find out what is learnt by students and what remains unclear, teachers can easily satisfy the students' requirements by improving their learning.

Following were the key objectives of the present research study:

- i. To have an understanding of the degree to which teachers make use of different classroom assessment techniques to understand and to assist both teaching and learning processes.
- ii. To investigate the perception of teachers about CATs in higher education.
- iii. To study perceptions of teachers about efficacy of classroom assessment techniques at H.E.

- iv. To identify issues regarding inability of teachers to reap the benefits of classroom assessment techniques at H.E.

Following three questions directed the study:

- i. How do teachers perceive CATs in H.E level?
- ii. What is the influence of perceptions of teachers on their classroom assessment practices?
- iii. What kinds of CATs are being used?

## **II. Methodology**

The study was designed to investigate the teachers' perceptions about CATs at higher education level. A survey questionnaire was designed.

### **A. Population**

Population of the study comprises all the teachers of three public-sector and three private-sector universities of Multan, Pakistan.

### **B. Sample**

The sample for the study was selected from three public and private sector universities. Random sampling technique was used for taking subjects as the sample. Fifty-four teachers were chosen as the sample from six universities.

### **C. Development of the Research Instrument**

According to the nature and purpose of research, a questionnaire was designed which had three parts. The first part contained 6 demographic items. The second part had 11 items to get teachers' responses about the frequency of using CATs which is measured against "Use" scale. It was proposed to assess teachers' practices of CATs on a scale from 5 (Used very often) to 1 (Never used). This scale was adapted from Assessment Practices Inventory (API, Zhang & Burry-Stock, 2003). This instrument was designed in United States of America to measure teachers' skills and use of assessment practices. The third part had 25 items to get teachers' perceptions about classroom assessments which were measured against 5-Point Liker-scale ranging from 5 (Strongly Agree) to 1 (Strongly Disagree) options.

## **III. Analysis of the Data**

After collection of data, the researcher used different functions from Microsoft Excel including percentage, Mean. The researcher also applied *z*-test to draw the significant difference in the level of agreement/ disagreement and draw Gender-wise, Public sector versus Private sector and Faculty-wise Analyses.

### **A. Analysis, Findings and Discussions**

In response to R.Q.1, the analysis of data revealed the following facts.

#### **R.Q.1 How do teachers perceive CATs in H.E level ?**

- *Determination of Grades* received the mean score (M=3.67) which exposed that majority of teachers perceived that determination of students' grades is the basic purpose of classroom assessment.

- *Effectiveness of Teaching* received the mean score (M=4.24) which strongly supported teachers' opinion that determination of effectiveness of their teaching is the basic purpose of classroom assessment.
- *Learning Objectives* received the mean score (M=3.76) which reported that majority of teachers were of the view that the purpose of classroom assessments is to determine whether students have mastered the learning objectives.
- *Preparation for Examination* received the mean score (M=4.3) which strongly supported teachers' view that the main purpose of classroom assessments is to prepare students for examination.
- *Overemphasized Role of Grades/GP* received the mean score (M=4.43) which strongly supported teachers' view that in higher education the role of grades/GP is overemphasized instead of emphasizing on the role of students' learning.
- *Answerable for Learning* received the mean score (M=3.85) which favored teachers' view that the purpose of assessment in higher education is to hold students answerable for their learning.
- *Interest in Graded Assessments* received the mean score (M=4.31) which favored that majority of teachers were of the view that their students are interested only in those assessments which give them marks/grades.
- *Non-graded Assessments* received the mean score (M=2.2) which shows that majority of teachers did not agree that their students work seriously even if assessments are non-graded.
- *Focus on Competition instead of Learning* received the mean score (M=4.56) which strongly favored teachers' view that the common trend in our education system is to focus on competition between students instead of their personal improvement in learning.
- *Focus on Examination* received the mean score (M=4.37) which strongly favored teachers' view that their students are interested only in those learning skills which are required to attempt examination papers.

**R.Q.2: What is the influence of perceptions of teachers on their classroom assessment practices?**

- *Graded and Non-graded Assessments* received the mean score (M=3.81) which shows that majority of teachers suggested that graded assessments are better to promote students' learning than non-graded assignments
- *Integral Part of Daily Teaching* received the mean score (M=2.2) which suggested that majority of the teachers consented that they did not consider that classroom assessment techniques should be an integral part of teachers' daily teaching.
- *Assessment Techniques in Practice* received the mean score (M=2.52) which suggested that teachers did not consent that assessment techniques which are in practice, stimulate the students to work hard.
- *Rote-learning instead of Deep Learning and Higher-order Skill* received the mean score (M=4.39) which suggested that teachers were of the view that assessment techniques which are in practice, promote rote-learning instead of deep learning and higher-order skills.
- *Shift to Assessment for learning* received the mean score (M=4.46) which suggested that teachers consented that there should be a shift from assessment based on grading to assessment based on students' learning.

- *Difficulties in Assessment* received the mean score (M=4.46) which suggested that teachers were of the view that they find it difficult to manage classroom assessment activities due to large size of their classes.
- *Continuity of Lecture* received the mean score (M=3.23) which suggested that teachers consented that classroom assessment techniques affect the continuity of lecture.
- *Distract the Attention* received the mean score (M=3.23) which suggested that majority teachers consented that use of classroom assessment techniques distract the attention of their students.
- *Impossible to Manage* received the mean score (M=3.96) which suggested that teachers were of the view that they find it almost impossible to spare time for classroom assessment techniques due to hectic teaching plan of semester system.
- *Life-long Learners* received the mean score (M=4.13) which suggested that teachers were of the view that the use of classroom assessment techniques can make students life-long learners.

### R.Q.3: What kinds of CATs are being used?

As indicated earlier, the researcher employed 'Use Scale' to measure the frequency of using CATs.

**Table 1: Frequency of Using CATs**

S.#	Assessment Techniques	Used Very Often %	Used Often %	Used Sometimes %	Rarely Used %	Never Used %
1	Question/Answer	48.14 %	44.44 %	5.55 %	1.85 %	—
2	Presentations	12.96 %	30.14 %	13.70 %	25.18 %	18.00 %
3	Written Tests	10.48 %	14.55 %	50.96 %	21.70 %	2.31 %
4	Background knowledge probe	3.40 %	11.60 %	22.96 %	24.48 %	37.56 %
5	One-minute Paper	—	3.70 %	5.55 %	29.63 %	61.11%
6	The Muddiest Point	—	—	—	12.96 %	87.04 %
7	The One-sentence Summary	—	—	9.25 %	14.81 %	75.92 %
8	Student-generated Test Question	—	—	1.85 %	25.92 %	72.22 %
9	Directed Paraphrasing	—	10.97 %	39.24 %	37.77 %	12.02 %
10	Conceptual Mapping	10.37 %	18.22 %	31.48 %	25.93 %	14.00 %
11	Application Cards	—	—	—	22.22 %	77.77 %

It was found that majority of teachers use Question/Answer Techniques frequently in their daily practice. Presentations, Conceptual Mapping and Directed Paraphrasing Techniques are used sometimes while One-minute Paper, The Muddiest Point, The One-sentence Summary, Student-generated Test Question and Application Cards Techniques are rarely used by the teachers.

### IV. Comparison between Overall Levels of Agreement/Disagreement

For drawing Gender-wise, Public sector versus Private sector and Faculty-wise analyses, the Mean scores for all the items and for all the teachers included in the study with respect to sectors, gender and faculty of the respondents were calculated. Mean combined and SD were tabulated and calculated in the table. *z*-test was applied. Sector-wise Analysis (Public sector versus Private sector Analysis) showed that the table value for *z*-test is 0.05(1.96) while calculated value for *z*-test is 0.12 which is less than the table

value. Gender-wise Analysis showed that the table value for  $z$ -test is 0.05(1.96) while calculated value for  $z$ -test is 0.11 which is less than the table value. Faculty-wise Analysis The table value for  $z$ -test is 0.05(1.96) while calculated value for  $z$ -test is 0.20 which is less than the table value. As the calculated value of  $z$ -test is less than the table value in all the three analyses, therefore there is no statistical significant difference in the level of agreement/disagreement.

## V. Conclusion and Implication

On the basis of above findings, it was found that the basic purpose of existing assessments is to prepare students for examination. Students are interested only in those assessments which contribute to their grades/GP. Such an attitude promotes rote-learning instead of deep learning and higher order skill. It was found that teachers use a few assessment techniques, that too, for determining the effectiveness of their teaching rather than monitoring students' learning. It was found that not only teachers but also students do not pay a serious heed to non- graded classroom assessment techniques which mainly focus on students' learning. A quite casual attitude was observed from both sides. It was found that teachers find it difficult to manage CATs due to hectic routine of semester system. Moreover, students' exam-oriented approach is a great hindrance in its way. It was found that students are ignorant of the boon of the assessment techniques as far as their contribution in making them life-long learners, is concerned.

On the basis of the research study, it is proposed that teachers and students should develop their assessment literacy. For this purpose teachers should keep abreast of the latest approaches in the field of classroom assessment. Teachers should integrate assessment into their instruction for improving the quality of education at higher education levels. It is the demand of time to train our students to reap the benefits of CATs which mainly focus on student-centered learning approach. Teachers can inculcate these values in students by making an effective use of classroom assessment techniques at higher education level. Professional development courses on assessment should be designed for teachers. Awareness should be created among teachers and students to promote assessment for learning, which is being ignored due to many reasons. Our whole education system must undergo a shift from exam-oriented approach to learning-oriented approach. In order to promote assessment for learning, it should be made a part of curriculum. Student's involvement in learning should be established which will serve as a sound basis in teaching-learning process. For this purpose, CATs can play an effective role to engage students in learning activities; hence, developing a learning community.

## References

- Angelo, T. A., and Cross, K. P. (1993). *Classroom Assessment Techniques: A Handbook for College Teachers*. (2nd ed.) San Francisco: Jossey-Bass.
- Angelo, T. (1998). *Classroom assessment and research: An update on uses, approaches, and research findings*. San Francisco: Jossey-Bass.
- Black, P., Harrison, C., Lee, C., & Marshall, B. (2003). *Assessment for learning: Putting it into practice*. Berkshire: McGraw Hill Education.
- Black, P. & William, D. (1998b). Inside the black box: Raising standards through classroom assessment. *Phi Delta Kappan*, 80 (2), 139-148.
- Conner, C. (2003). *Assessment and testing in the primary school*. London: Routledge/Falmer.

- Cross, K. P., & Steadman, M. H. (1996). *Classroom research: Implementing the scholarship of teaching*. San Francisco: Jossey-Bass.
- Dochy, F. (2001). A new assessment era: different needs, new challenges. *Research Dialogue in Learning and Instruction*, 10 (1), 11-20.
- Earl, L. M. (2012). *Assessment as learning: Using classroom assessment to maximize student learning*. 2<sup>nd</sup> ed. Thousand Oaks, CA: Corwin Press.
- Glaser, R. (1990). Toward new models for assessment. *International Journal of Educational Research*, 14(5), 475-483.
- Guskey, T. R. (2003). How classroom assessments improve learning. *Educational Leadership*, 60(5), 6-11.
- Jarvis, P. H. J. and Griffin, C (1998). *The Theory and Practice of Learning*. London: Routledge.
- Kelly, D. (2005). Do you know what your students are learning? (And do you care?). In O'Neill, G., Moore, S., & B. McMullin, B. (Eds). *Emerging Issues in the Practice of University Learning and Teaching*. Dublin: AISHE (online).
- King, K. (1999). *Metacognition in the composition classroom*. Idaho: Idaho State University.
- Mihram, D. (2014). *Classroom Assessment Techniques*. University of Southern California. *Center for Excellence in Teaching*. *John Hopkins Bloomberg School of Public Health*. [http://www.crlt.umich.edu/sites/default/files/resource\\_files/ClassroomAssessmentTechniquesHopkins.pdf](http://www.crlt.umich.edu/sites/default/files/resource_files/ClassroomAssessmentTechniquesHopkins.pdf). Accessed February, 17.
- Steadman, Mimi. (2011). "Using Classroom Assessment to Change both Teaching and Learning." *New Directions for Teaching and Learning*. No. 75, Fall 1988. San Francisco: Jossey-Bass. 8 Oct. 2011. Print.
- Stiggins, R. J. (1999). Assessment, student confidence, and school success. *Phi Delta Kappan*, 191-198.
- Zhang Z. R., & Burry-Stock, J. A. (2003). Classroom assessment practices and teachers' self-perceived assessment skills. *Applied Measurement in Education*, 16(4), 323-342.