Renovation of Assessment on Teaching and Learning Quality Based on the Orientation of Student's Competence Development

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Abstract

Human resource is one of the factors affecting the success of the country's industrialization and modernization. To develop high-qualified human resource, it is necessary to renovate education in general and make comprehensive changes in tertiary education in particular in which how to renovate the students' quality assessment for the better is really essential. In addition to traditional assessment (TA), authentic assessment (AA) is being widely applied in education.

The paper mentions the advantages and disadvantages of traditional assessment and authentic assessment. The advantage of authentic assessment is that it is possible to assess and orient the design and implementation of the syllabus. Besides, it is possible to measure the thinking capability and problem solving skills of learners through learning situations and authentic learning tasks.

On the basis of theory and practice of authentic assessment, the paper suggests three methods of authentic assessment which are competency-based syllabus design, task-based assessment, combination of traditional basement and authentic assessment. Competency-based syllabus design focuses on detailedly determining the course objectives, designing learning topics and lesson plans, integrating assessment in learning and teaching process. Task-based assessment assesses students' scientific knowledge, intelligence, social and professional skills, moral behavior. The criterion assesses the learners' competence levels ranging from average to good level. Despite many advantages of authentic assessment, the combination of both TA and AA is a good suggestion in assessment.

Key words:
Quality assessment, traditional assessment, authentic assessment, competency-based syllabus design, task-based assessment.

1. Traditional assessment (TA)- Achievements and challenges

Looking back the development of the assessment process, its practice and theory, it can been seen that there have been certain achievements, which plays an important role in assuring the training quality of universities in Europe, some universities in North Eastern Asia as well as in the United States.
It can be seen that traditional assessment has been one of the most popular assessment methods. By applying this model, the followings can be assessed:

Learning results of students is assessed based on the syllabus (assessing levels of knowledge, skills, attitude…)
Assessing the learning outcome based on the practice and performance of skills.
Assessing the learning outcome based on the functions and objectives of training process (diagnostic assessment, formation assessment, summary assessment…)

Assessing the learning outcome based on the criteria, standards or based on the progress of learners… [1, 34-38]

Besides, the special measurement tools (especially the sets of Tests) being standardized to ensure the high reliability are used to diversify the assessment forms such as confirmation assessment, selective assessment, diagnostic assessment … However, the assessment results seem to be not satisfactory. Especially, TA does not seem to be highly effective in the relation with the process of training and students' competence developing. Therefore, it is necessary to change and renovate the types and models of learning outcome assessment.

2. Authentic assessment (AA)- new assessment viewpoint, connecting teaching and learning process, authentically assessing learners' competence.

Since the 1990s of the 20th century, the disadvantages of TA has been founded. Therefore, efforts have been focused on finding new supplementary assessment method. To make the assessment process more effective, AA has been proposed and applied to practical tertiary education. [8].

Then AA has been also applied to vocational education, which makes AA a future tendency in the assessment of education outcome [7]. Generally speaking, AA is a type of assessment which requires learners to complete practical learning tasks on the basis of applying essential knowledge and skills. [6]

Authentic Assessment-(AA) has been mentioned as Performance Assessment, Alternative assessment or Direct Assessment. Generally, AA constitutes 2 main factors which are the tasks to be completed by students, and the detailed descriptions of these tasks (rubrics). Below are properties and advantages of AA.

2.1. Characteristics of AA.

By summarizing the theory and practical researches on AA [2], [6], [8], the following characteristics of AA can be shown:

- Authentic assessment requires learners to show their competence (on the basis of summarizing knowledge, skills as well as attitude, mentality, and emotion) to create the products through solving the situations, learning tasks related practical applications.

- Authentic assessment requires students to perform tasks of creating products, which means to assess students' outcome through performing tasks in learning process and tasks of completing the required product.

- Authentic assessment focuses on measuring the thinking capability and problem solving skills of learners allowing learners to express their thinking, creativeness, and their competence in learning process. AA is an assessment model which assesses students' knowledge acquirement and the application of knowledge to solving authentic tasks.

- AA provides direct and real evidences on students' outcomes of learning process based on the real qualification and competence of individual students rather than based on marks.

- AA allows teachers to apply more assessment methods.

2.2. New advantageous factors of AA in comparison with TA.

In TA, the training syllabus orients the activities of learning outcome. Based on the training objectives, the training syllabus is designed with knowledge levels and skills suitable with the objectives. Therefore, the teaching process is performed and students have to acquire these knowledge and skills in the learning process.

To get students' outcome, it is necessary to assess students' to identify the acquirement levels of knowledge and skills of students. Generally, the knowledge level is focused on to assess students' outcome. Then, the forms of assessment is designed and conducted to assess students' skill levels. In some cases, the new attitudes of students are formed based on the contents of the syllabus.

In contrast, in Authentic Assessment, assessing activities orient the syllabus designing and learning process. To achieve the objectives, learners are required to show their competence to solve the real situations. Therefore, learning tasks must be effectively performed so that students will be able to cope up with and solve real situations after graduation.

To assess real students' outcome, teachers require students to perform learning tasks related to real situations through which performance competence of students is assessed rather then knowledge and skills which students receive from the syllabus.

Comparison of TA and AA :

TA: Selecting one answer	AA: Performing a task
Imagination	Real life
Recalling/ Awareness	Designing/ applying
Based on teachers	Based on students
Indirect evidences	Direct evidences

3. The application of authentic assessment to renovating the process of assessing, teaching, and learning based on the orientation of student's competence development.

By combining the advantages of TA with suitable forms of AA in the process of renovating, improving the quality of teaching and learning in the orientation of students' competence development, it can be suggested that we can renovate both teaching and students' outcome assessing in the following fields:

3.1. Competency-based syllabus

It is known that a syllabus is constituted with many different parts which have close and logical connection with one anther in terms of both contents and forms. It contains necessary information and is like a lesson plan which shows clear steps to conduct a lesson. In the view of authentic assessment, a syllabus must contain the followings:

Showing detailed course objectives by setting the standards of expected learning outcomes in the forms of competence which students are required to acquire in the process of learning and after learning process. The competency consists of standards of knowledge, attitudes, skills, and behavior.

Based on the content structure of the subjects, different learning topics including selective, compulsory, and self-study ones are designed. All these topics are performed by students under the guidance and assessment of teachers.

Designing suitable lesson plans on the mentioned learning topics, concurrently providing for students with clear guidance information so that they can prepare and perform learning tasks related to different topics of the subjects. Preparing to combine the methods of teaching, learning and students' outcome assessing through multi-dimension interactive activities between teachers and students, focusing on the activities of assessing students' competence.

3.2. Integrating students' outcome assessing into teaching activities (of teachers) and learning activities (of students) in the forms of tasks-based assessment.

In authentic assessment, the methods of learning and teaching are included in the activities of teachers and students through the specific learning topics of subjects, the information about testing, assessing students' competence is recorded and assessed by requiring students to perform learning tasks. By requiring students to perform task of resolving real situations, the learning process become not only useful but also really essential to develop their real competence [5].

Generally mentioning the characteristics and objectives of learning tasks which students are required to perform in almost subjects in the training curriculum, it can be seen that the learning tasks focus on the below:

Tasks of acquiring scientific knowledge;

Tasks of training awareness and intelligence competence;

Tasks of training basic social skills;

Tasks of training professional skills ;

Tasks of training personality

Depending on different learning characteristics of different subjects, different learning tasks can be designed and applied.

In spite of the differences, the learning tasks must include the below basic properties [5] :

Learning tasks must be related to real life;

Learning takes are clearly identified and suitable with students' competence;

Learning tasks must be complex which students must spend significant time, and intelligence on;

Learning tasks enable students to solve problems based on different viewpoints and different sources of references;

Giving students chances and requiring students to show their cooperative skills in learning;

Allowing students to train their skills of self assessing their learning outcome individually and socially;

Learning tasks are integrated and conducted with different topics. Learning tasks should combine different subjects and different fields;

Learning tasks are closely related to learning outcome assessment ;

Performing learning tasks help learners achieve the learning outcome by their real competence which is suitable with the training objectives;

Learning tasks allow students to suggest multiple and effective solutions to the problems.

On the other hand, in addition to the learning tasks, the evidence information about the assessment can be attained from portfolios or from the rubrics [7]. These are 2 among many assessment tools handed down from TA and widely used in AA.

3.3. Criterion used as both a basis of assessing learning task completion and a tool orienting students' competence.

To assess students' outcome, it is necessary to design the criteria based on which teachers can identify which level of competence students get.

However, traditional assessment applies only 3 below sets of criteria

The criteria are used to mark students' middle-term and final tests, or in some cases used to mark students' projects, home assignments… rather than orientation of learning and teaching;

The criteria are shown to teachers or examiners, not to students.

The criteria focus on measuring detail and specifically students' outcome of knowledge, skills related to the subject syllabus rather assessing and orienting students' competency in learning process.

Because of the above mentioned reasons, criteria used in traditional assessment are not really useful and effective.

In authentic assessment, the assessing criteria are designed totally based on the scientific requirements of measurement and assessment. However, the advantage of this method is that how to use and apply these criteria to combining teaching-learning activities with assessing based on the orientation of students' competence development.

Being applied and used in authentic assessment, the criteria need to cover a large scope of teaching, learning and assessing process. The criteria need to satisfy the following conditions:

The assessing criteria are designed based on the level of performance competence which students acquire, which means the criteria focuses on measuring students' knowledge, skills to solve real learning tasks.

The information related to the assessing criteria are clearly shown in the learning topics and informed to students in the learning process;

The assessing criteria in authentic assessment are not only the assessing tools but also the information orienting students in learning and self-assessing based on students' competence development.

The fact shows that the application of these criteria to teaching and learning need to be based on the competence of students' in performing the learning tasks as well as based on the requirement of the subject.

Therefore, the criteria also regulate the achievement level which students have to achieve. Generally, there are 3 levels of requirement which students have to achieve in learning process. For example, 1-minimum level (Students get average grade of these if completing 100% requirement of the criteria); if students do not meet the requirements of the criteria, they will get bad grade) ; 2-control level (if students meet the requirements of this criteria group, they will get good grade) ; 3-high level ((if students meet the requirements of this criteria group, they will get high grade-excellent grade) based on the competence standards [4, 158-169].

Concurrently, by applying these criteria, it is possible to record the progress in the development of students' competition.

3.4. Combination of TA and AA in teaching and learning in the orientation of students' competence development

As mentioned above, TA and AA are the two assessing methods which does not eliminate but supplement each other in assessing students' competence in the orientation of students' competence development. For example, there are popular forms of assessment such as diagnostic assessment, formation assessment, summary assessment, assessment based on standards (relative), assessment based on criteria (absolute), or assessment based on the progress of learners…

Techniques and assessing forms of TA can be used in AA. However, the difference is that the objectives and using methods of the measurement tools are renovated and integrated in teaching and learning in the forms of learning tasks performed by students. In this case, process assessment or summary assessment do not disappear in AA but turn into learning tasks performed by students.

In addition to this, the tools and techniques in TA used for assessing students' outcomes of knowledge, skills, analyzing ability, critical thinking, skills of summarizing and critical thinking, skills of problem solving, skills of applying and expressing; attitude, awareness, skills of studying, skills of responding to teaching activities …[3] are selected, re-designed and summarized in the forms of criteria group used for assessing the performance of learning tasks related to the topics of each subject.

4. Conclusion

There are no perfect assessment models in students' learning outcome assessing. However, in comparison with TA, authentic assessment is one of the assessment models which shows its advantages in measuring students' outcome based on developing students' competence related to requirements of real work.

With the successful application of AA to renovation of assessing, teaching , and learning in the orientation of students' competence development, the basic factors of training process will become more closely connected with each other; the learning process will provide students with more skills of competence development rather than separate knowledge and skills.

In spite of the mentioned, the application of AA does not mean to eliminate TA from the training process in tertiary education. However, to renovate the process of assessing, teaching, and learning in the orientation of students' competence development, it is essential to ensure the requirements of competency-based syllabus design, to divide the contents of the subjects into different learning topics, to create criteria for assessing the performance of learning tasks based on performance competence of students and integrate these criteria in learning and teaching process.

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Dinh Van Nhuong[1] *is Rector of Sao Do University, Vietnam. He graduated from Hanoi University of Science and Technology with Ph.D Degree in Electricity. He has many years of experiences in education and training management. He is much interested in education and training renovation. Besides his many researches on electric measurement and automation, as a leader of a university, he has paid much attention to the researches on quality improvement of management and training process. He also won Best Paper Award in the past ANQ Congress.*

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