

THE MEASUREMENT OF STUDENT ACHIEVEMENTS FOR CAPACITY BUILDING ON HIGHER EDUCATION

Thu ThuAung

Department of Computer Engineering and Information Technology

Yangon Technological University, Yangon, 11012, Myanmar

mamagyi.thu@gmail.com

Abstract— Capacity building is the phenomenon by which individuals and organizations obtain, improve and retain the skills, knowledge and other resources needed to do their jobs competently. Capacity building framework is not only for teachers but also for students. In this framework, there is a need to be synchronized with system policies and performance management. Moreover teacher improvement is based on student improvement and student outcomes. This paper aims to focus on improving effective teaching and professional learning. Professional learning without depth in evidence or theories or feedback does not enable effective growth or change that, in turn, builds capacity and develops quality in achieving student learning outcomes. In a country, future-oriented education system is needed to plan and to be higher education system. Because helping students developed a future-oriented perspective allows them to manage the uncertainty of the future logically in academic settings. In this paper, it intends to explore the perception of students and teachers for higher education. Some attributes such as learning outcomes and assessments are used as research tool from one Myanmar University included as population for higher education. In this study, achievements of students are mainly analyzed on two academic years. According to the basis of findings, the conclusions can be drawn. So the measurement of student achievements is very important to prepare for future needs and challenges of higher education. Capacity building and planning should be carried out better education.

Keywords: *Capacity building, higher education, learning outcomes, achievements*

I. INTRODUCTION

Higher education system of a country depends on the history, the culture, the economics and the growth potential of that country. There can measure whether a country develops or not with an effective education system. Education system is a lead role in the development of a country. In 21st century, the challenges become more and more. The influencing of universities will also have the impact of education. Higher education reflects directly with the development of economic, human beings and modern societies.

Higher education is very important for a developing country as Myanmar. Higher education promotes the economic knowledge, richer culture and intellectualism in a

country. Some developed countries already planned for future perspectives of higher education and attained the futurology. A country with sustainable higher education enhances over the world.

Now a day, the progress level of a country cannot assure without training and research on higher education. The new touchstones of quality of a higher education are not only its human resource development, but also its moral commitment to society for desirable social change or progress through modernization, even strategic factorization [1].

Today, higher education is the important role of developing country like Myanmar to manage the demands and to solve the challenges of present time. So, we have to prepare ourselves for future needs, demands and challenges of higher effective education. Preparation for the future has been a primary function of education. Planning should be made about what may be expected future of higher education and how may be constructed the capacity buildings for teachers and students of effective professional teaching and learning. Many universities have realized the activities for implementing higher education for sustainable development. It should be developed in future-oriented higher education. Education is a key factor in achieving sustainable development.

II. CAPACITY BUILDING

Ensuring capacity for lasting improvement is critical to address challenges of quality and equality [2]. The general orientation is towards addressing sets of improvement-related capacities. Especially the changing teaching and learning is absolutely needed fundamental to improvement.

Capacity building is an extremely complex endeavor. In capacity building for future-oriented education, the sustainable teaching and learning is the core for school, college and universities. Life-long learning based on higher effective education of a country, continuous learning of teachers and institutions itself for the purpose of enhancing students learning, influenced by individual teachers within an institution of that country.

So today building capacity for future-oriented education is facing on as a challenge of country improvement. Capacity building also needs to provide support for and development of a wider workforce. Several countries have adapted to this

agenda by developing integrated community schools and services [2].

In a rapidly changing world, capacity building needs to address both the present and the future. A recent widening of the educational agenda to include, among important outcomes, involving both internally and supporting them externally of teachers and students.

A large body of education improvement literature highlights generic features of improvement, frequently citing the following: a focus on learning and teaching; using data to help guide improvement efforts; high quality professional development, embedded within professional learning communities [2].

In this paper, framework is provided by analysis of improvement and effectiveness based on research, practice and strategies as evaluation tools worked with university to support and quality assure self evaluation efforts.

Capacity building for future-oriented education approaches different countries strategies of education. There are also efforts in several other countries to find ways to help build capacity in universities facing significant challenges where student achievement is poor, including government initiatives in their own system.

Improving what goes on in the classroom was synonymous with instructional improvement; finding out what instructional strategies were linked with better student outcomes and thinking of ways to build teachers' capacity to use these strategies [2].

In many cases, curriculum, learning and teaching strategies can offer to success the future-oriented education. So learning outcomes and assessments of teachers and students are analyzed to forecast and prepare for future education in this paper.

III. OBJECTIVES OF THE STUDY

The major objectives of the study are the following:

- To focus on improving and effective teaching and professional learning in Myanmar,
- To intend to perception of teachers and students for future-oriented education in Myanmar,
- To prepare achievement on teachers and students capacity needing for future higher education,
- To fill the demands based on teachers and students suitable on education environment and society in Myanmar country.

IV. DATA COLLECTION

In this study, some course information, learning outcomes and assessments of teachers and students from Computer Engineering and Information Technology Department on Yangon Technological University in Myanmar were collected as input data. Out of the whole population, students' achievement and assessments on each subject and individual teachers included on academic year.

In compliance with the university's guidelines regarding classroom research, all the study materials were reviewed to the implementation of the study. Data were collected in a class which had the fourth year students on academic year (2016-2017) and (2017-2018).

V. METHODS AND PROCEDURES

This paper was descriptive research in nature. A class which a subject on one academic year consists of course information and mapping. According to relevant subjects, different course information and mapping. But a class met fifty minutes per session, at least three days a week. This survey based on different subjects in one academic year. Assessment is a process of measuring and collecting the data (mark/score) in a manner that enable to analyze the achievement of the intended learning outcomes and the effectiveness of the learning activities.

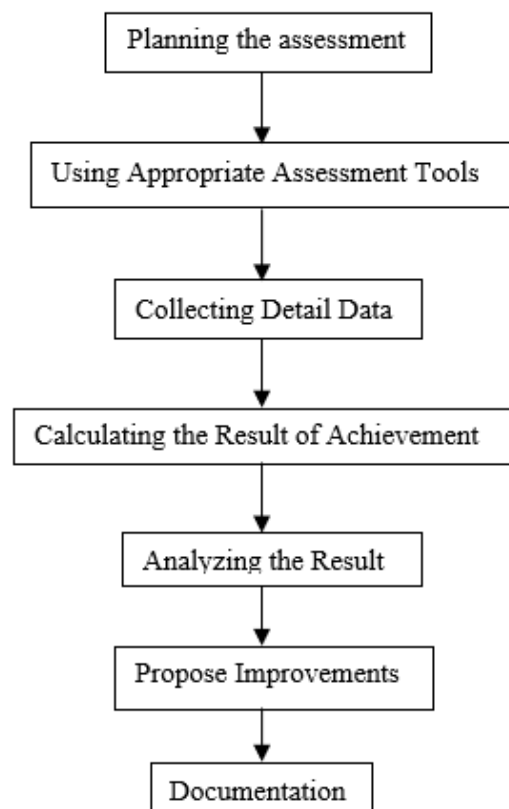


Fig. 1 The steps of assessment plan

In step 1, planning of assessment was mainly based on syllabus, topics, level of difficulty; mark distribution etc. planning of assessment should be based on outcomes (CLO and PO) and the distribution of mark to be based on CLO-PO mapping.

In step 2, developing the assessment elements (Final exam, test, quizzes etc) and assessment form/templates/rubrics based on the PO.

In step 3, assessment mark/ score data to be collected in detail and grouped according to PO in order to support the calculation of PO attainment.

In step 4, calculation has to be carried out in order to determine on how much the student achieved his/her PO.

In step 5, the results/ findings are numbers. Analyzing is to give meaning (interpretation) to the numbers.

In step 6, the analysis made on the results/ findings, provides the necessary information on what and how actions need to be taken in order to improve students achievement.

In the last step, all evidences relating to assessment process, methods, tools, templates, rubrics, results, analysis and suggestion for improvements need to be documented systematically for accreditation purposes.

VI. RESULTS AND EXPERIMENTS

According to assessments, the achievements of fourth year students on each subject in one academic year can be found in Table I.

Table I

Achievements of the fourth year students in 2016-2017 academic year

Academic year	Subjects	Achievements
2016	Information Security	83%
	Data Communication	87%
2017	Software Engineering	90%
	Digital Signal Processing	93%
	Control	97%
	Information Theory	96%

The following Table II showed in the measurement of achievements of the fourth year students.

Table II

Achievements of the fourth year students in 2017-2018 academic year

Academic year	Subjects	Achievements
2017	Information Security	96%
	Data Communication	87%
2018	Software Engineering	90%
	Digital Signal Processing	96%
	Control	97%
	Information Theory	99%

When the Table I and II are compared, the later year (2017-2018) can be found the better achievements of the students.

Table III

Progress of the achievements during two academic years

Subjects	Achievements	
	2016-2017	2017-2018
Information Security	83%	96%
Data Communication	87%	87%
Software Engineering	90%	90%
Digital Signal Processing	93%	96%
Control	97%	97%
Information Theory	96%	99%

In Software Engineering and Digital Signal Processing subjects, the achievements on each academic year are better.

Among them Software Engineering subjects can be distinctly found the more achievements of the students 83% to 96%.

And Digital Signal Processing subjects can be significantly found the student achievements 93% to 96%.

In addition, the 3% increased achievements of the students can be found in Information Theory subjects.

VII. DISCUSSION AND CONCLUSION

A summary of student perceptions of assessments practiced with the five selected subjects can be found in Table III. Teachers must evaluate what their desired learning outcomes are before choosing between futurology activities for their class.

According to the final achievement results, teachers can prepare their course and teaching techniques for next academic year. In addition, planning can draw the better teaching and learning strategies and then their capacity can also be built on future-oriented education for their students and learners to improve.

In conclude, this paper studied on Yangon Technological University in Myanmar. The vision of Yangon Technological University is to become a highly-prestigious technological centre of excellence in teaching and research with a strong commitment to educate and train students of high caliber to become well-rounded, highly-qualified engineers, specialists with the ability to solve complex problems and researchers who can discover and innovate new things, all for the good of society.

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