UNDERGRADUATE LEARNING ASSESSMENT: UNIVERSITY POLICY AND DISCIPLINARY CULTURE IN TAIWAN

Sheng-Ju Chan & Angela Hou Yung-Chi
Taiwan

Abstract

Learning assessment in higher education has recently become the focal research issue attracting the attention of the academic community and causing extensive debating. Assessment used to be the exclusive responsibility of a teacher. However, the situation has substantially changed in the recent years due to increased attention to educational accountability, students' core competencies, employability and tightening of internal quality control within the university. For the purpose of our research we chose a typical university in Taiwan as a case study example and explored whether the learning assessment has been coherently structured, arranged and implemented or not. Moreover, students from different colleges were asked to share their first-hand experience in terms of learning assessment practices. Our findings indicate that the university under study has been lacking systematic policy in learning assessment. Moreover, assessment culture, awareness and skills for the whole university are yet to be improved. Various disciplinary measures and approaches have led to different assessment practices and experiences gained by students. Two competing notions emerge from the empirical evidence: respect for professional/teaching autonomy and greater university standardization. How to balance such tension and enhance the university's role in learning assessment have become major objectives for these universities in Taiwan.

Keywords

Learning assessment, quality assurance, assessment methods, disciplinary culture, teaching autonomy, assessment standardization

1.   Introduction

In general, learning assessment refers to all those activities undertaken by teachers, and by their students in assessing themselves, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged. It is the main task for teachers to take a wide variety of techniques or instruments to determine whether learning has been achieved or not. This indicates that assessment is typically taken by individual teacher. In echoing this stance, Peng (2010) pointed out that 'students learning performance is assessed by individual teacher during the class. It is quite unusual the overall learning outcome is verified by university, faculty/school or department' (p.87).Such assertion seems to insist that learning assessment should be entirely in the hands of teacher's autonomy. Should university, faculty or even department level engage into such process by instituting relevant policies, initiatives or projects? In answering these questions, we can look into some practical issues taking place at university daily life.

There are several pragmatic issues heatedly debated among the faculties and students. For example, are diverse assessment methods encouraged (Maki, 2002)? Are there specific competencies encouraged in relation to certain assessment methods? Is the grading system using score, grade or pass? Should student's learning achievement be presented as a normal distribution? How do universities measure the overall outcome of the students in the long run? Are teachers well-equipped with the appropriate assessment skills for the job (University of Texas at Austin, 2017)? In terms of assessment techniques used, whether university is interested in encouraging adopting multiple assessment methods or not. This is an essential question that academic staff should face. In response to cultivating different skills, teachers might be advised to take various assessment orientations. For example, skillfully using machinery tools or software requires demonstrating hands-on ability. For the sake of maintaining student's quality, what are the proportions that students can receive the highest level grade or there is fixed standards to be achieved? If leaving this issue entirely to teacher, it will be subject to the quality control of each faculty. All these lingering issues are difficult to answer and pose obvious challenges to modern higher education systems. Particularly, if the higher

education sector wants to play appropriate roles in meeting the demands prescribed above. Therefore, it is very timely and meaningful to investigate this emerging important topic.

2. Literature Review

2.1. *Macro drivers in relation to learning assessment*

While we direct our attention to learning assessment in higher education, several macro drivers deserve a closer examination. The massification of higher education in many countries leads to the concerns of what students have been taught and how desirable learning outcomes appear to the wider society. On the one hand, the public would like to have further information about how effective and efficient universities deliver knowledge, skills and literacy to students (Ewell, 2009); one the other hand, parents, students and employers also wonder what the learning results or outcomes actually are. In other words, the former intention is based on a wider social incentive of educational accountability, while the latter is highly related to the pursuit of understanding 'core competence' that each student should retain. In this growingly competitive workforce, companies and enterprises are keen to gauge the completeness of each graduate in terms of their 'employability'. Student learning outcome, therefore, is directly related to the ability and capacity cherished in the labour market. Based on the previous macro drivers, the assessment and evaluation of student learning increasingly becomes the focal element in the higher education sector. In addition, how different qualifications and degrees are comparatively equal at the international level also lead to the emphasis of student learning assessment, as national accreditation organizations have strong motivation to undergo degree and even credit mutual recognition (and transfer). Greater international mobility of students, programs and providers also forms the needs of learning assessment in this globalized world.

2.2 Institutional assessment policy and mechanism

Learning assessment policy and mechanism at the institutional level are getting important due to their strategic roles as discussed previously. Therefore, there are some systematic components required to sustain effectively student learning. First of all, as Peng (2010) mentioned, university should clarify what its educational mission and objectives are. These will be used to guide assessment policy and mechanism. For example, University of California Los Angeles emphasizes 'inquiry-based' education. It serves the basis to design meaningful assessment policy. Second, university should cultivate a culture for learning assessment within the campus. For instance, teacher training courses should be provided. Setting course teaching objectives and assessment standards can be under the leadership of Dean for Academic Affair, dean of college and head of department. Faculty is encouraged to improve teaching through assessment outcomes. Finally, it would be good to institute a specialized unit or office to promote assessment policy/project at the university level. This work can be done through institutional research office (IR) or center for teaching and learning development.

2.3 The USA case study

The main motivations why an American university is interested in establishing such assessment policy and mechanism are related to the requirement of the state government and quality assurance agency. Peng (2010:97) indicated there are seven parts to be covered with respect to assessment policy and mechanism:

- Goals and objectives of assessment;
- Strategies and principles of assessment;
- Administrative organization and obligations
- Assessment scope and concrete projects;
- Assessment information dissemination and service;
- Utilization and benefit of assessment information.

Western Michigan University is a meaningful unit promoting learning assessment in higher education. It set up an Office for Assessment and Undergraduate Studies (http://wmich.edu/assessment/about), which covers all the major components including mission, administration, policy, instructor course, resources and outcome report etc.

2.4 Academic disciplines, types of learning outcome and assessment

Within the university campus, a wide range of subjects vary in terms of assessment methods. Becher & Trowler (2001) indicated that 'disciplinary contrasts include the relative differences in staff approaches to student assessment' (p.196). They distinguish disciplinary subjects into two fields: hard and soft subject. For the former one such as natural sciences and engineering, it prefers 'short answer papers and multiple choice questions'. The latter is 'greater openness to continuous assessment, long essay questions and oral examinations sometimes'.

In addition to the differences of disciplines, there are different types of learning outcomes. According to Ewell (1987), there are knowledge outcomes, skills outcomes, attitudes and values outcomes, and behavioral outcomes. If undergraduates require all these learning outcomes, it is essential to encompass a variety of assessment measures and strategies for acquiring these abilities and skills.

2.5 Student assessment methods

In addition to the institutional assessment policy and planning at the university level, some concretes methods, techniques or tools are used by faculty and teacher to detect to what extent that undergraduate students have learnt from the teaching activities. Here are the popular and frequently used ones.

- Assignment after class
- Classroom test (include quiz, mid-semester and final exam)
- Classroom discussion and Dialogue
- Interview
- Project report(written or oral)
- Works and hands-on test
- Classroom behavior and learning attitude such as attendance and participation
- Peer review, contribution of collaborative learning

Another focal point is how to use different assessment methods in a coherent and effective way sustaining student learning. Students tend to be concerned with assessment methods, proportions, items and standards. What the detailed requirements that student should attain in each assessment methods. For example, what are the requirements for a hands-on test? They should be clear, detailed and easy to follow.
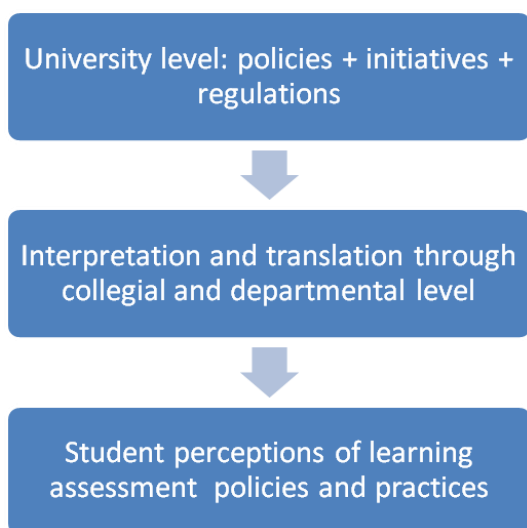
3. Research Questions, Design and Methods

Based on the previous exploration and literature review, we can summarize four major research questions. First, what the major policies, regulation and measures in terms of investigated case university are. Second, it is our intention to examine the mainstream methods, issues and roles that teachers play in relation to assessment. Finally, how student perceive the current learning assessment practices at the investigate university.

In this study, we purposely choose one university as the case study so as to deeply understand its system, practices and behaviors of teacher and student. The main research methods adopted include document analysis and interviews. As far as the document analysis is concerned, they cover relevant initiatives, regulations, mechanisms and rules etc. as well as the assessment methods in courses syllabuses. As to the interview, we targeted both at students and teachers (we have finished student interviews and partially teachers'). In total, we interviewed 30 students at this case university, divided into three wider disciplinary areas: humanities and education, social sciences, and engineering and natural sciences. Each area has ten students ranging from different academic subjects. Their perceptions and opinions are critical information to examine the learning assessment in higher education.

3.1 Research framework

Our main analyses on the learning assessment can be divided into three layers as shown below. They are university level, college/department level and students' perception. University has the legal right to enact overall policies, initiatives and regulations on learning assessment. These, in turn, are interpreted and implemented by the college/department level. Finally teacher and students become the practitioner and receivers of these concrete practices and measures.

University level: policies + initiatives + regulations

Interpretation and translation through collegial and departmental level

Student perceptions of learning assessment policies and practices

3.2 Main Focuses of Interview

• Do you know the learning assessment policies and regulations?
• How do you perceive these policies and regulations? Are they necessary or important? And why?
• Please reflect upon the course, which retains the most comprehensive student learning assessment, from the last semester. In this course, (a) what assessment methods used by the teachers are? (b) do you think teacher's assessment plan is consistent with the university's policy and regulation? Why?
• What are the advantages and disadvantages of these learning assessment policies and regulations at your university?
• What are your suggestions to these policies and regulations?

3.3 Case study: institutional profile

This is a public-funded university located in the mid-southern part of the island in Taiwan. Founded as a comprehensive institution in late 1980s, the investigated university has seven colleges with high quality teaching and research force. Among its more than 500 faculty, up to 98% retains a doctor degree from leading universities in the West or well-known local ones. This is a very typical university in Taiwan following national regulations and practices like its counterparts. Therefore, the findings generated from this case, to some extent, can be applicable to other institutions. Among its relevant policies and regulations in relation to learning assessment, this university has the following:

(a)   University Learning Principle, degree requirement (core competence and indicators)
(b)   A comprehensive curriculum map for each department or college
(http://coursemap.ccu.edu.tw/)
(c)   Teaching Syllabus for each course under the supervision of Office of Academic Affairs
(d)   Teaching Survey for each course by the end of semester

4. Research Findings

4.1 Lack of complete learning assessment policy

After reviewing all the available online and written documents, it is obvious that this investigated university has no complete and appropriate assessment policies, regulations and even practices. These interviewed students commonly agreed that they don't know what learning assessment policies and practices are. They 'assume' that these should be entirely decided by teacher. This means that individual teacher can do assessment as he/she see fit within their professional autonomy and judgment. As a matter of fact, students believe that learning assessment should be under the jurisdiction of 'Office of Academic Affair' of this university. However, there is no corresponding information on the website, in a student handbook or a detailed instruction guide. Only degree requirements for each department are presented, where thresholds include compulsory, elective and common courses etc.

4.2 Curriculum Map: Don't touch upon assessment

The investigated university indicated that curriculum map, as a powerful tool for student, 'can guide self-exploration, understand ability, ponder access path and career development so as to do curriculum planning and enhance competitiveness'. In principle, this university has relatively appropriate structure of curriculum map and proposes the 'core key competence'. In this curriculum map, general education, service learning and interdisciplinary learning at the university levels are extra credits that students should or are strongly advised to take. At department/faculty level, individual curriculum map is presented and plotted with core competencies, which are main learning objectives for students. However, these documents and plans rarely touch upon the meanings or im-

plementation of assessment. How they measure students' achievement in relation to the core competencies.

4.3 Diverse approaches to learning assessment: standardized university version versus teacher professional autonomy.

When students were asked that should university have learning assessment policy campus-wide, their responses vary substantially among different disciplinary backgrounds. For students at colleges of social sciences, they agree a standard model should be provided to teachers. At the same time, it should be transparent and public. Taking similar stance, students from humanities and education fields believe university should enact assessment criteria and in turn require teachers to design their course syllabus accordingly. However, if we ask the same question students mastering engineering and natural sciences, their responses would be opposite. These students universally indicated that university should respect the teacher's professional autonomy in deciding how to do assessment. Therefore, there are two major camps emerging from this initial investigation: standardized university version versus teacher professional autonomy.

4.4 Various Assessment methods

What are the main methods used to measure students' learning achievement? This question again varies by disciplines. In terms of social sciences, some tend to focus on pencil-and-paper test while others emphasize on hands-on or practical assignment. As far as humanities and education are concerned, teachers tend to choose essays, group report, and film production or even interview. As to the sciences and engineering, main assessment method goes to pencil-and-paper test with quantitative manner. They use quiz, mid-semester exam and final report to reach the ultimate score or grade for students. Sometime, they take attendance into consideration. These differences among assessment methods respectively adopted seems to coincide with the observation of Becher &Trowler (2001) in relation to 'hard subject' and 'soft subject'. Table 1 randomly shows the assessment methods employed in six courses from different colleges at the investigated university. Taking an overall perspective, they also point out the similar characteristics we just discussed previously.

Table 1 Various assessment methods adopted at different colleges

A course from College of Social Sciences	A course from College of Engineering	A course from College of Humanities
Mid-semester exam*20% Attendance*20% Personal project (4 homework)*30% Final exam and group case report*30%	Attendance*10% (before 9.00 am) Homework*10% Mid-semester exam*40% Final exam*40%	Course Participation*40% Mid-semester exam*30% Final exam*30%
A course from College of Management	A course from College of Sciences	A course from College of Education
Assignment*50% Final exam*50%	Four tests*80% Assignment*20%	Attendance*10% Project*40% Assignment*25% Mid-semester exam*25%

4.5 How to respond to different assessment approaches

In principle, there are various assessment approaches in this research. However, it is also very important to know how students respond to these different orientations. We observe some variations in terms of different disciplines. For social sciences students, they insist that university should regulate teacher and need to ensure equality and standards. As to the humanities and education, students indicated they don't know how to react to teachers' assessment practices as there is fixed and stable assessment standards and criteria. Finally, students at colleges of sciences and engineering point out that they have to adapt to the different teaching styles and evaluate their own learning outcomes. Summarizing the previous findings, it seems to echo the two competing explanations towards learning assessment. Social sciences, humanities and education tend to agree a standardization model while sciences and engineering surprisingly emphasize to respect the teaching autonomy and their own standards.

5. Discussions *5.1 Lack of coherent learning assessment policy*

As we have demonstrated previously, this investigated university has no comprehensive and coherent learning assessment policy. At the university level, there should have intensive linkage among educational objectives, core competency, learning outcome, curriculum map and internal quality control. Literature review points out certain American universities did set up their own educational missions and has linked them to overall assessment strategies and planning. After all, the core educational objectives have to rely on the implementation of corresponding assessment policies so as to ensure their realization in the educational context. For example, if innovation and critical thinking are important, then how such abilities should be measured, particularly at sciences and engineering college. Moreover, it is imperative for this investigated university to strengthen institutional assessment culture, awareness and skills. These can be enhanced through the establishment of Center for Teaching Development or Office of Institutional Research. These institutional mechanisms can help to empower faculty's skill formation and the importance of having better assessment culture as a whole.

5.2 The role of disciplinary culture

Previous analyses clearly indicated that assessment practices at the classroom level perceived by interviewed students vary significantly due to their disciplinary background. This can be mainly explained by their diverse approaches towards assessing knowledge and ability students learn (Nesi & Gardner, 2006). Hard sciences such as engineering prefer quantitative and simple techniques and ignore the benefits of multiple assessment strategies. Instead, soft sciences such as humanities, social sciences and education tend to adopt different standards, angels and criteria to judge the various ability dimensions. Owing to such varied disciplinary cultures and faculty's assessment styles, students also responded differently towards whether university should have unified learning assessment policy. Nevertheless, as far as 'multiple ability development' for student is concerned, differentiated assessment methods, strategies and standards should be endorsed and encouraged. Unfortunately, there remains to be improved at our case university as empirical evidence has shown.

5.3 Teaching autonomy and standardization

Traditionally, assessment seems to lie at the discretion of faculty professional autonomy in Taiwan. The public believe it is entirely at the hand of individual teacher (Adelman, King, & Treacher, 1990). University should not intervene too much and our investigated university also follows this path. However, along with the emergence of macro-driver such as educational accountability, core competencies, employability and internal quality control, the role, scope and nature of assessment have gone beyond the traditional definition. Therefore, university needs to re-ponder whether or how assessment policy should be regulated at the institutional level. However, due to the disciplinary divergences, students had responded differently towards respecting for teaching autonomy and greater standardization. In essence, they are quite different developments with respect to assessment policy. We argue that there should be some principles and grading standards for faculty and students at soft science subjects. At the same time, it is also very meaningful to promote 'multiple assessment techniques' to hard science subjects.

6. Conclusions

It is important to examine the learning assessment at undergraduate level. If we take the notion of 'employability' into account, the assessment policy matters seriously as it can help to determine whether undergraduates are equipped with required skills, attitudes and knowledge after years' learning. Therefore, universities in Taiwan should establish a complete and coherent assessment policy with the vision of having better assessment cultures, awareness and skills among faculty and staff. Moreover, our discussions also confirm that disciplinary culture and the degree of standardization of knowledge have led to the different challenges and controversies to learning assessment. How to balance various needs is critical. On the one hand, we are keen to purse better assessment policy with transparent and open standards to faculty and students; on the other hand, promoting flexible and multiple assessment techniques and strategies are beneficial to nurturing student's diverse skills and abilities. All these reflect the complicated challenges caused by the mixture of disciplinary cultures, respecting teaching autonomy and greater standardization.

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TOTAL QUALITY MANAGEMENT IN HIGHER EDUCATION INSTITUTIONS

Yogesh Kumar Sharma

Higher Education Department Government of Rajasthan, India

Abstract
The paper addresses the issue of quality education. The definition of the concept is analyzed from a variety of aspects. The concept of Total Quality Management with a number of its education-related dimensions as evidenced from the literature is also considered in the paper. The authors emphasize that the measurement of the quality, inherently subjective, can be evaluated using different parameters following the researchers in the field, who regard three dimensions of quality in higher education - Product, Software and Service. Pre-requisites for the application of Total Quality Management (TQM) in higher education institutions and the challenges faced are also considered here. The authors draw a conclusion of the benefits of TQM for quality enhancement in education and meeting the needs and expectations of all the stakeholders.

Introduction

The issue of quality education has been a matter of concern for everybody, is widely discussed and debated, and remains to be immediately addressed because of growing aspirations of various stakeholders - students, parents, business, industry, academia and society. This concern for higher education has become a global phenomenon and new buzzwords like accountability, transparency, customer orientation, responsiveness and quality have been associated with higher education. Now one of the most urgent questions is the definition of quality of higher education and how it can be achieved. Therefore, by identifying what the quality means we shall have to undergo plenty of explanations, which somehow reflect industry, business and society perspective. Campell, and Rozsnayi have defined concept of quality of education in many ways:

Quality as excellence: Quest to be the best.