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Gaining Institutional Efficiency in the General Education Assessment for Technology Program Accreditation

ASM Delowar Hossain [*]
City University of New York, United States

Abstract

This work addresses the need to merge various student learning assessment activities to gain efficiency. Specifically, it discusses a mechanism of institutional assessment efficiency through development of common instruments for general education assessment that can support more than one accreditation requirement.

Keywords*: Assessment, General Education, Accreditation, Professional Skills*

[*] ASM Delowar Hossain, New York City College of Technology, City University of New York, United States
E-mail: *Username1@institution.xy*

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Introduction

Assessment is an instrument to gauge our success in terms of preparing our students for the professional world. It is an integral part of the educational process and typically is required for accreditation (an external verification process of quality of education).Accreditation guarantees that an academic institution's programs are consistent with standards set by the profession for which the program trains its students [1-4]. It can be a process at the institutional level or at the program level. The fundamental difference between institutional and program level accreditation is that the institutional accreditation certifies an entire institution where as the program level accreditation gives credibility to a specific program/discipline within an institution. Program level accreditation certifies that a specific program adequately prepares its students to meet the expectations of the profession that they are being prepared for. It encompasses numerous programs throughout a range of professions including medicine, law, business, engineering, journalism etc. [5]. The example of a renowned program level accreditor for engineering discipline is ABET [6]. Among the institutional level accreditors, the most renowned are the regional commissions [7], such as Middle States Commission on Higher Education (MSCHE) [8].

In many instances, an institution needs to fulfill requirements of a number of accreditation assessments. Each accreditation body has its own distinctive practices influenced by its intrinsic cultural attributes of its region [9]. However, their overall accreditation requirements and student learning outcomes assessment structure tend to be more alike than different [10]. At the least, a number of general education (e.g. professional skills) assessments are similar among most accreditation standards. However, many are unaware about any similarities in assessment requirements among accreditation bodies. Consequently, many institutions undertake a number of independent, uncoordinated, and redundant assessments for each accreditation requirement. It results in the development of redundant instruments and processes, which in turn leads to inefficiency. For example, an technical program conducts its programs specific assessment along with general education assessment. Concurrently, the institution as a whole undertakes general education assessment activity for various reasons, including intuitional accreditation. Therefore, assessment becomes redundant and an unfocused effort for accreditation compliance. At this juncture, it requires a coordinated effort to align common assessment activities, specifically general education assessments, to bring about institutional efficiency.

Current Practice

For accreditation to take place there must be a demonstration of achievement of certain goals. This process requires a systematic understanding of the students' learning via assessment. It entails the collection and preparation of appropriate data to examine the fulfilment of student outcomes. An effective assessment utilizes appropriate measures, whether direct, indirect, statistical or qualitative to verify the attainment of student outcomes. These methods require certain tool/instrument for assessment. Development of these tools, in some cases, is demanding and requires frequent updating. As institutions exhort uncoordinated efforts to develop these assessment instruments, it consumes resources inefficiently and degrades quality. This is specifically true for professional skills assessment. Table 1 shows an example of common assessment requirements between institutional (MSCHE) and program level (ABET) assessment of engineering/ technology program. It clearly shows that the basic math/science and professional or soft skills are common to both assessments. It also indicates possible sources of assessment. A number of empirical studies established that professional skills (soft skills)-communication, interpersonal skills, ethics etc.-are much more important for job performance than are technical abilities [11]. Some experts believe that professional competencies are twice as important in contributing to excellence as are just intellect [12]. Therefore, it is imperative that we establish an institutional process to take advantage of these similarities to bring about institutional efficiency in assessment for a very important student learning outcome assessment (professional skills), which benefits many programs across the institution.

Table 1. Examples of common assessment components for general education

ABET Criterion (number in parenthesis correlates to the professional skills from column 3)	MSCHE Standards (number in parenthesis correlates to the professional skills from column 3)	Professional Skill (assessment terms)	Institutional Assessment Resource (corresponds to assessment terms in column 3)
Criteria 3: Student Outcomes(SO)	**Standard 12: General Education**		
a) … apply knowledge of mathematics, science **(4)**	-consistent with institutional mission, a program of general education that incorporates study of values ethics, **(2)** and diverse perspectives; **(1)**	(1) Teamwork	(1) Inter-disciplinary
d) an ability to function on multidisciplinary teams **(1)**		(2) Ethics	(2) Social Sciences
f) an understanding of professional and ethical responsibility **(2)**	- institutional requirements assuring that, upon degree completion, students are proficient in oral and written communication **(3),** scientific and quantitative reasoning, and technological competency appropriate to the discipline; **(4)**	(3) Communication	(3) English
g) an ability to communicate effectively **(3)**		(4) General Science	(4) ABET programs, natural sciences

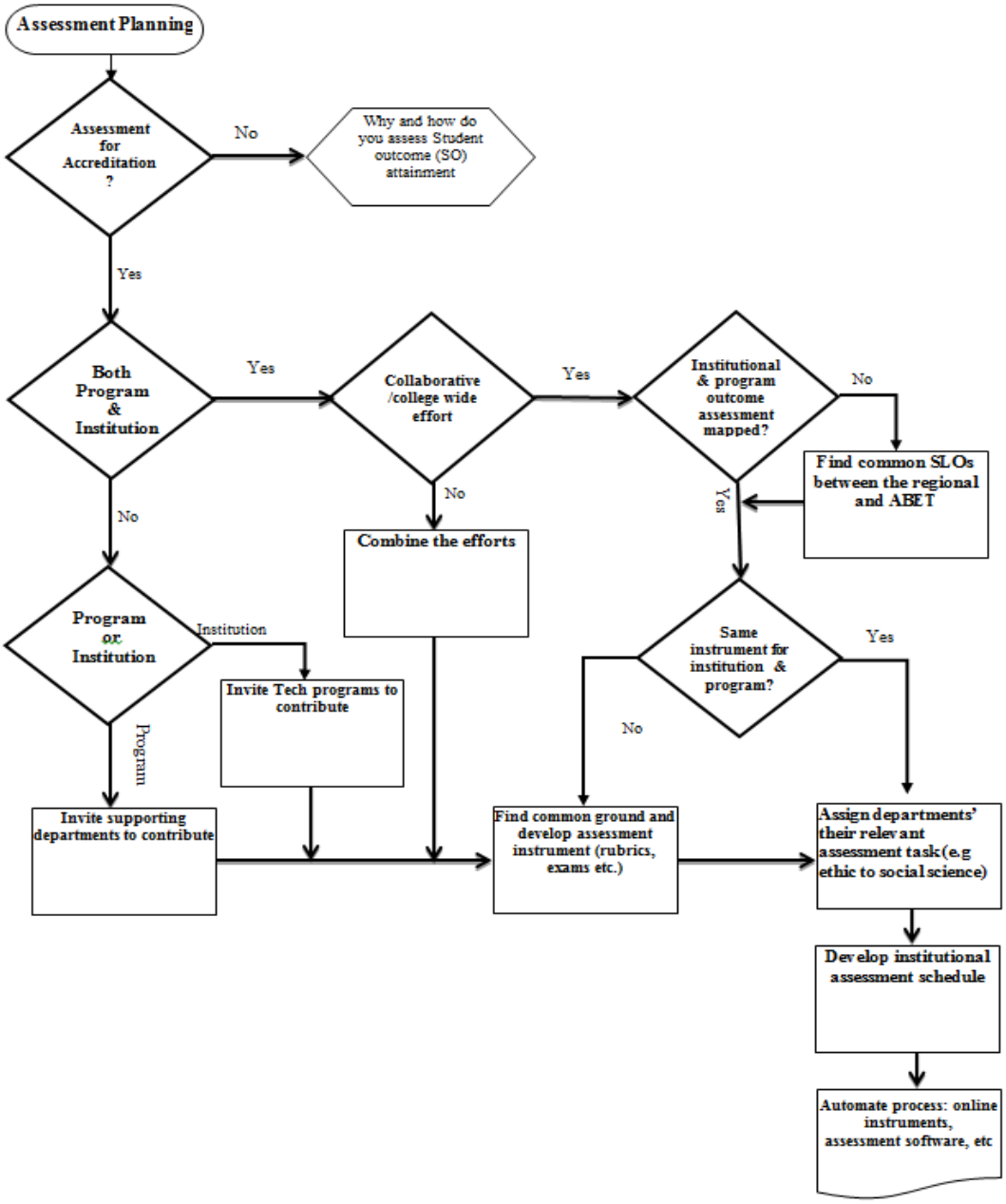

Figure 1. Proposed approach for institutional efficiency in assessment

Proposed Approach

Figure 1 shows a flow chart that potentially checks and establishes an intuitional process of efficiency in assessment of professional skills. It indicates that at the initial stage we need to find assessment needs and common ground among accreditation requirements, specifically the professional skills. Then we need to identify the sources/ departments that can support those assessments. Finally, to assist that source to generate assessment methods and instruments that will support all the affected departments/programs.

Conclusions

Assessment is an integral part of the educational process and is also an accreditation requirement. It helps us to gauge our success in terms of preparing our students for the future workplace. Many instances an institution needs to fulfil requirements of a number of accreditation assessments. Lack of coordination and planning results in assessment being a burdensome, redundant, and meaningless effort without any value. We highlighted the need of a conscious, proactive, and

coordinated effort to align our assessment requirements (specifically for professional skills) to make it streamlined, focused and more meaningful. It is to be noted that this approach can also bring efficiency to other common assessment throughout the college and programs. We demonstrated the framework to attain the needed efficiency in assessment through exploiting the common accreditation requirements and initiating collaborative efforts of streamlining assessment planning and instruments

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