

A recommended closed-loop assessment of learning outcomes process for hospitality programs

A recommended
closed-loop
assessment

The experience of two programs, Part 1

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Abstract

Purpose – Because of the increasingly higher expectations of accrediting organizations, calls for greater accountability from state governments, and students' demand for an education that prepares them for a career, most hospitality programs are now required to have an effective assessment of learning outcomes process. The increasing popularity of the assessment of learning outcomes process is viewed as highly positive because it can be considered as best practices in higher education. The paper aims to discuss this issue.

Design/methodology/approach – This is Part 1 of a two-part article that provides an overview of the justifications for implementing an assessment of learning outcomes process, the steps that were developed by two hospitality programs and the experiences of the two programs during implementation of the seven steps. Part 1 includes foundational principles of the process and the first three of the seven steps.

Findings – The steps in a closed-loop assessment of learning outcomes process are relatively detailed; however, because of changes in expectations of stakeholders and the requirements of accreditors, they are now mandatory for most hospitality programs. Therefore, the choice is not whether to implement them, but when to implement them. From a competitive standpoint, it is to the program's advantage to begin as soon as possible. Another factor to consider is that the implementation of an effective closed-loop assessment of learning outcomes process will take several years to complete.

Originality/value – This paper is presenting a critical view of one of, if not the most important concepts in higher education, the closed-loop assessment of learning outcomes process. Hopefully, the information on the process that is provided and the experiences of the two programs can shorten the learning curve for other hospitality programs.

Keywords Assessment, Accreditation, Learning outcomes, Closing the assessment loop, Curriculum map, Transparency of the learning outcomes process

Paper type Conceptual paper

In response to the increasingly more rigorous requirements of accrediting organizations, calls for greater accountability from state governing bodies, and student demands for an education that prepares them for a career, many hospitality programs and their faculty



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are in the process of modifying what they teach and how they teach it (see Appendix) (Childre *et al.*, 2009; Reich *et al.*, 2016). The focus is shifting from faculty covering course content in relatively passive lecture formats to uncovering content by focusing on specific program and course learning outcomes and by actively involving students in their own learning. Students are progressively engaged in activities that promote analysis, synthesis and evaluation of course content, such as case studies, preparing research reports and functional plans, and interviewing industry practitioners. This movement from teacher-centered to learner-centered instruction is characterized by designing intended learning outcomes for students and then providing a process or system that leads to the attainment of those learning outcomes (Huba and Freed, 2000). Learner-centered instruction promotes long-term learning through active and experiential engagement, rather than the short-term learning experienced through teacher-centered lecture and memorization-for-the-test pedagogies. One of the lesser known related quotes attributed to Albert Einstein is “Education is what remains after one has forgotten what one has learned in school.” Even long ago, Einstein realized the problems associated with our historical reliance on passive short-term learning pedagogies and the advantages of student-centered active learning.

As in any business endeavor, and hospitality programs are in the business of education, leaders need to have a plan or process in place to increase the chances of achieving objectives and to minimize mistakes. In literature regarding organizational efforts of any kind, it has been written many times that if one fails to plan, one plans to fail (Jakoubek, 1994). In the first article of the first issue of the *Harvard Business Journal*, Donham (1922) spoke of the need to have a system for business where people could learn from the experiences of others so that they could limit the likelihood of their repeating mistakes and increase the likelihood of success. Interestingly, he also wrote that “energy, enthusiasm, initiative, creative ability, and personality” (p. 1) were also necessary attributes of success – a set of attributes that still holds true today, especially for higher education and specifically, the assessment of learning outcomes process. The assessment of student learning, or more accurately termed the closed-loop assessment of student learning outcomes, requires an articulated and detailed process that, if effectively implemented, increases the likelihood of the achievement of the appropriate student learning outcomes (Alstete, 1995).

The process associated with the assessment of learning outcomes is a relatively straightforward list of steps that can result in significant improvements in both faculty performance and in students effectively learning what they should from each of their hospitality courses. This process can best be described as best practices for higher education. A major implementational challenge is that faculty must be convinced that student learning outcomes assessment is a straightforward and reasonable objective that is important for students, the program and for faculty performance. Faculty resistance is to be expected as many will view this change as a threat or waste of time (Linkon, 2005), but in the end, they must understand that without this effort, the future viability of some hospitality programs could be threatened as more nimble public and private competitors fill the need of a relevant education that will lead to meaningful employment (Kirschner, 2012). Faculty must also understand that the assessment of learning outcomes process is the most effective means of ensuring that faculty are giving their best effort in fulfilling their responsibilities (National Governors Association, 2007). Most importantly, faculty must realize that student learning outcomes assessment is critical to student learning and student success.

Perhaps the best way to achieve these goals and overcome these challenges is to utilize various participative management tactics. An example would be to have open forums to make sure faculty and other stakeholders such as students and key industry supporters of the program understand the importance of the overall effort as well as have the opportunity to collaborate in the creation of the assessment of learning outcomes process and participate in its implementation. One of the reasons for open discussions is that change can be

uncomfortable and some faculty who may not be convinced that they are already doing anything but an excellent job of teaching their students. Gaining the commitment of faculty requires that learning shortfalls be addressed as curricular issues rather than teaching deficiencies (Kelley *et al.*, 2010). Openly discussing current best practices for teaching, learning and assessment, and their importance to any program will be difficult for all but the most recalcitrant to challenge (Kuh and Ewell, 2010). In the end, if some are not willing to adopt effective teaching practices, the fact that a closed-loop assessment of learning outcomes process is mandated by virtually every accrediting body may provide the needed incentive (Rexeisen and Garrison, 2013). If this still does not motivate certain faculty, then it is up to program administrators to address the issue on a one-on-one basis.

Although there are many different approaches to the student learning outcomes assessment process, the following steps provide a foundation of typical best practices that can be modified to fit the needs of any program (Buzzetto-More, 2010; Cervetti *et al.*, 2012; Kuh and Ewell, 2010; Kushimoto, 2010; National Institute for Learning Outcomes Assessment, 2016; Richardson and Healy, 2013).

A closed-loop assessment of learning outcomes process

The assessment process, like any business planning process, provides a step-by-step method for achieving the intended goal, including a control mechanism for making sure that all items stay on track (Asif and Raouf, 2013; Maki, 2002). Additionally, like any business-type plan or process, the assessment plan is iterative, in that at any point in the process, it may be necessary to review and perhaps modify prior steps rather than moving on to subsequent steps. For example, if a learning outcome was determined to be difficult to measure and assess, it may be necessary to go back in the process to decide if the learning outcome must be modified or if a different type of measurement and/or assessment must be found. The assessment process discussed in this paper was developed by combining the experience of two major hospitality programs' curriculum committees. The processes in both universities were reviewed at faculty meetings. The university assessment offices also provided hotel and restaurant management faculty with professional development on various aspects of the assessment process.

Based on the experiences the authors have had with the assessment of learning outcomes process and the prior research of others (McClendon and Ho, 2016; Saroyan and Trigwell, 2015; Sheran and Sarbaum, 2012), it was determined that the seven steps shown in Figure 1 should produce effective results.

1. Design student learning outcomes

Student learning outcomes are statements of what faculty and other stakeholders (e.g. future students, parents, potential employers) expect students to be able to know and do as a result of their education. They provide the foundation for the assessment and improvement of student learning. There are three main types of student learning outcomes: university learning outcomes – general learning outcomes for all students (e.g. critical thinking, diversity, communication, quantitative reasoning, sense of purpose/becoming successful adults, ethical orientation); program learning outcomes – broad but targeted learning outcomes for all students in the program (e.g. customer service, cooking skills, leadership, budgeting, problem-solving skills/critical thinking, professional responsibility); and course learning outcomes – specific learning outcomes for each course. Generally, the faculty, through the faculty senate, with input from university administration will have primary responsibility for university learning outcomes. The hospitality program's faculty, with input from program administrators, will have primary responsibility for both program and course learning outcomes. Program learning outcomes and, as appropriate, course learning outcomes will need to be supportive of university learning outcomes.

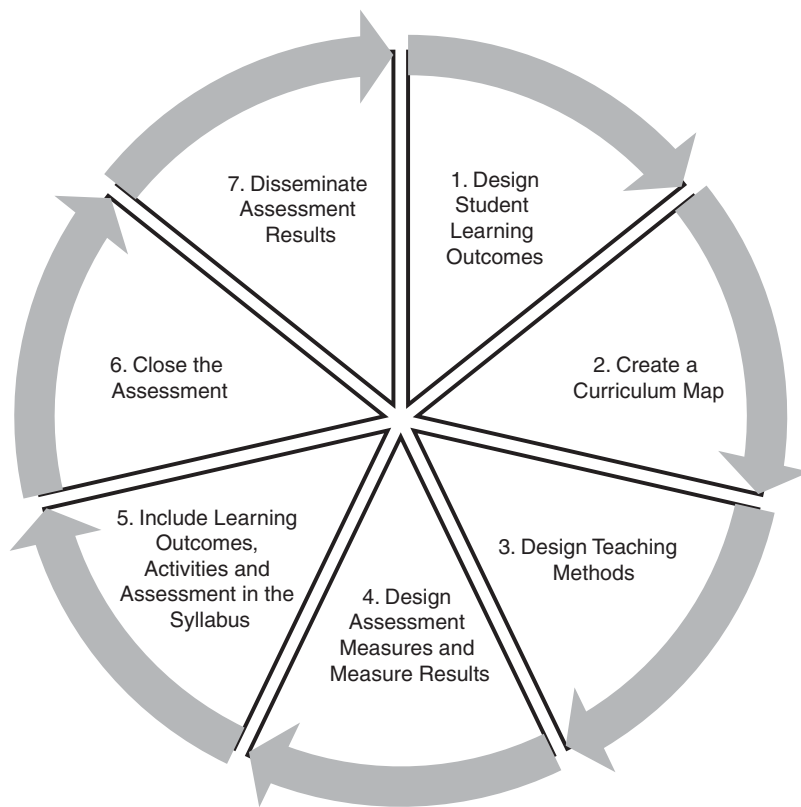


Figure 1.
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In *Understanding by Design* by Wiggins and McTighe (1998), the concept of backward design was introduced and appears to have become a prominent concept of curriculum design (Jones *et al.*, 2009; Kelting-Gibson, 2005). Backward design begins with the end in mind – determining the desired learning outcomes (Graff, 2011). Initially, it is best to first focus on learning outcomes that are most critical to the overall goals of the learning experience and that can be meaningfully measured. The reason for this approach is that at the beginning of the process the learning curve is the greatest and resources may not have been effectively assigned. Though ideally all faculty should collaborate on completing these steps, typically one faculty member or perhaps a committee (e.g. curriculum committee) will be assigned to the effort. Supplemental compensation or release time for this effort could be considered.

Often, getting faculty to work on writing effective program and course student learning outcomes is the most challenging part of the assessment process. The following questions can help initiate the design process:

- What do you want students to be able to do?
- What knowledge, skills (i.e. complete a task) or abilities (i.e. complete a task in a real-life situation) should students demonstrate to show that they have achieved the learning outcome?
- How will students be able to demonstrate what they learned?

Learning outcomes generally begin with an action verb, such as analyze, apply, calculate, categorize, compare, define, demonstrate, explain, identify, list, plan, predict, prepare, solve use, write and so forth. Additionally, they should be relevant, measurable, timely, specific and attainable (Morrison *et al.*, 2011). For example, “Demonstrate problem-solving skills,” is not specific enough and will be difficult to measure, while “Use the concepts of market segmentation, target marketing and positioning to determine the most suitable market segment for a luxury hotel in Scottsdale, Arizona,” though still challenging, is more specific and measurable. One way to determine if a learning outcome is effective is to ask if it can be measured and if what was learned can be demonstrated (Keshavarz, 2011).

Since ineffective learning outcomes will not be productive, a process to ensure that learning outcomes will serve the purposes of the program, faculty and students is imperative. For example, a draft of the learning outcomes for a program or course could be established by faculty, then reviewed by other stakeholders, such as future employers, industry professionals, current students and alumni (Swanger and Gursoy, 2007). Involving external stakeholders, such as national advisory board members, whenever possible in the evaluation of learning outcomes will help gain industry support and validate their relevance and the importance of the outcomes.

Getting faculty to agree on what constitutes effective student learning outcomes and their appropriate assessment can be accomplished only if the ultimate purpose of the effort is clear (e.g. employability, knowledge of current industry practices) and if flexibility regarding course content and pedagogy is allowed. In every course, there will be learning outcomes that everyone agrees are critical to understanding or mastery. These learning outcomes must be mandatory; however, additional learning outcomes can be added at the discretion of faculty.

The experience

Because the assessment of learning outcomes process was voted on and passed by the faculty senate and is a requirement of the accrediting body, there was very little resistance from faculty. However, there were challenges in determining the specific learning outcomes for each course. For example, at Northern Arizona University (NAU), in one course a faculty member did not consider a certain learning outcome to be important, while two others that taught the course thought that it was. NAU has always done its best to accommodate reasonable individual requests, so open discussions were held to determine the best path to pursue. To help resolve disagreements, external stakeholders were asked for their opinions (e.g. alumni and national advisory board members). At the University of Houston (UH), the process started with assembling two stakeholder groups – recruiters and corporate-level managers/owners – to ask them to share the knowledge and skill sets they would like students to have mastered upon graduation. Alumni, current students, and faculty were present in these groups when the discussion took place. The results of the exit interviews of graduates were also included in this process. The information was then compiled and summarized for the faculty to use to create the curriculum map in the next step.

2. Create a curriculum map

A curriculum map is an illustration of the relationship between intended program learning outcomes and specific courses in a matrix format. At the course level, a curriculum map helps faculty to identify where and when concepts will be taught, how their course contributes to the entire curriculum, promotes the creation of assignments that support student learning outcomes and encourages collaboration with colleagues to identify where and how to support student learning. At the program level, a curriculum map ensures that all program requirements contribute to student success and that students have sufficient opportunities to work on and to achieve program student learning outcomes. It also

identifies where evidence of student learning can be collected, and it assists faculty to utilize the results to make program improvements. A curriculum map helps students to understand the “big picture” of the curriculum and how to take responsibility for their own learning. Additionally, a curriculum map helps all stakeholders, especially outside stakeholders understand the practical purpose of an education and why higher education is important (Shah *et al.*, 2015).

An important concept for both program and many course learning outcomes is scaffolding or educational scaffolding (Gibson, 2007). Scaffolding for a specific learning outcome is required when in order to achieve a specific educational goal/objective for a specific topic, hospitality students need to be exposed to increasingly more challenging learning outcomes in successive courses. For example, program learning outcomes related to written communication skills will need to be focused on with increasingly more difficult writing assignments in many courses over a number of semesters before the related program learning outcome is achieved. While Bloom’s taxonomy is the most popular hierarchy of learning outcomes/objectives (i.e. knowledge, comprehension, application, analysis, synthesis, evaluation) (Shaw and Holmes, 2014), some might decide to use a condensed hierarchy which might be easier for both students and faculty to understand and implement – introduction/awareness, development/understanding, and mastery. For example, students will first be introduced to the learning outcome – the topic, its key concepts and why it is important. Next, they will be given the opportunity to develop the skills required to learn how to perform tasks related to the learning outcome. Then, as appropriate, they will practice related tasks, sometimes in the same course but generally in several different courses, until they have mastered the specific learning outcome.

Although a curriculum map can take a variety of forms, typically the map will consist of a matrix that demonstrates which program learning outcomes are addressed in each course and across the curriculum (see Table I for a sample course curriculum map). A matrix helps make the scope and sequence of learning explicit as it presents and clarifies the link between curriculum instruction and assessment (Hardin, 2001). Most commonly, the broad or general program learning outcomes for each course will be listed on the curriculum map (e.g. written communications), while the specific program learning outcomes for each course will be listed in the syllabus (e.g. organize thoughts in writing in a manner that focuses on clarity,

		Supporting targeted course performance level: <i>I, D</i> or <i>M</i> <i>I</i> = Introduced/Awareness <i>D</i> = Developed/Understanding Practiced with feedback <i>M</i> = Demonstrated at the mastery level
Program learning outcomes	Human resource management (HA 345) assessments/ assignments supportive of program learning outcomes	
Analytical/Problem-solving skills, critical thinking	Review questions, case studies, HR plan	<i>I</i>
Communication (oral and written)	Class discussions (oral), in-class case studies (oral), 25+ page HR plan (written)	<i>I, D, M</i>
Leadership skills	Leadership roles in case studies	<i>I, D</i>
Professional responsibility	Heavy focus on values in the course, case studies	<i>I, D</i>
Technical skills	Must prepare graphs for HR plan	<i>I, D</i>
Successful adults	Heavy focus on values in the course, life-long learning, mental model of the HR plan	<i>I, D</i>

Table I.
Course curriculum map

flow and paragraph development). A curriculum map can be created by following these steps (University of Texas, 2011):

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- (1) Define program learning outcomes and list them in the first column.
- (2) Create a column heading for each course in the program. For this column, identify which course activities and performance assessments will support specific program learning outcomes.
- (3) The third column identifies the targeted course performance level for the course for the specific program learning outcome being addressed (e.g. *I*, *D* or *M* in Table I).
- (4) The map should be revised until all program learning outcomes are being effectively taught in a variety of courses and appropriate scaffolding needs are being met (i.e. appropriate learning progressions).

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The experience

The curriculum map was critical in helping faculty learn where program learning outcomes should be taught and that appropriate scaffolding expectations for each course were met. The process for preparing the curriculum map was very similar at both NAU and UH. All courses were listed on a spreadsheet in columns and all the learning outcomes in rows. Since there were multiple professors teaching the same courses, each professor was asked to fill out a row for his/her class. If there were any discrepancies in a course among different professors, then those professors met to decide what would be best for the students. Both NAU and UH decided to go with a condensed version of Bloom's taxonomy – introduction/awareness, developed/understanding and mastery for NAU and introduction, reinforced and mastery for UH. Because of the logic, transparency and minimization of bias inherent in the process, the curriculum map also reduced resistance to changing what faculty had been teaching and how they had been teaching it.

3. Design teaching methods to support learning outcomes

After faculty have articulated their expectations for student learning, they will need to consider appropriate methods of instruction to help students achieve each learning outcome. Though this step can at first seem a bit daunting, once one considers the relatively standard forms of pedagogy, such as lecture, discussions, written responses to review questions, case studies, research assignments/reports, presentations and so forth, the primary decision is to determine the most effective option(s) for the specific learning outcome. A key point here is to understand that there are differences in how students learn and how each learning outcome can best be taught. From biology to the humanities, from health sciences to business, all disciplines are focusing on new methods of engaging students (Gardner and Belland, 2012; Kim *et al.*, 2013; Phara and De Salas, 2009; Smart and Csapo, 2007). This is especially important as higher education shifts from the sage on the stage teacher-centered learning mentality to a student-centered learning paradigm. Teachers must shift from being disseminators (i.e. lecturers) to being facilitators of higher order critical thinking skills (Chan, 2016). Education must be more than temporary memorization – the key outcome of the traditional lecture.

Two critical practices should always be considered when determining the appropriate pedagogy: a variety of teaching methods should be used in order to increase all students' experience and understanding of the concept, and the concept of interleaving (i.e. rather than studying concepts sequentially (also known as blocking), such as 1, 2, 3 ..., faculty cover material in a repetitive and/or random manner, such as 1, 2, 1, 2, 3, 2, 3 ...) (Linderholm *et al.*, 2016). Interleaving has been proven to be superior to serial presentation of concepts. These pedagogies are especially helpful for important concepts and those that are more complex, such as marketing plans.

Today's typical college students have grown up with technology. They will text rather than talk, they want to express themselves, they expect quick responses and they also yearn for affirmation from a friendly instructor (Espinoza, 2012). They like to multitask and they expect their instructors to do the same in each class. Passive teaching methods, such as students reading on their own and lecturing by an instructor, have their place, but in today's world, especially with millennials and Generation Z students, it is a limited one. Having students read on their own and lecturing can be effective methods of introducing topics. However, once introduced, active learning needs to take precedence for higher order learning outcomes to be achieved (e.g. development and mastery). Long-term learning and understanding will rarely occur without a variety of active learning pedagogies. Few scholars have found better ways of expressing the misuse of lecturing than Chun (2010) in the following paraphrasing of a student's frustration: "Her professors almost exclusively lecture (which, it's been said, is a way for information to travel from an instructor's lecture notes to the student's notebook without engaging the brains of either). And somehow she is supposed to not only learn the course content but also develop the critical thinking skills her college touts as central to its mission" (p. 23). For learning to take place, at least for higher order learning such as development and mastery to occur, some form of active learning where students are engaged in meaningful exercises must be implemented (Draeger *et al.*, 2013). Tests of long-term memory have shown that lecturing is a less effective teaching method than problem-based learning (i.e. active learning) (Beers and Bowden, 2005).

The foundation of active learning is anything that requires students to both think and perform tasks related to what they are learning (Bonwell and Eison, 1991). This means students must do more than just listen and memorize facts for tests, or worse, simply recognize terms for multiple choice questions. For example, they can work on group case studies and engage in written exercises and research papers, all to hone their higher order critical thinking and problem-solving skills (Espinoza, 2012). Ideally, students can be provided integrated decision-making models, such as marketing and other functional planning models that allow them to develop the same mental models that successful hospitality managers use to solve complex business challenges (DeFranco and Reich, 1995). While all of these teaching methods can be effective forms of active learning, it must also be remembered that it is the way each is implemented that determines their success or failure. Smart and Csapo (2007) suggested an interesting four-step approach that can be used when implementing virtually any teaching strategy: experiencing the topic, reflecting on it through discussions, generalizing with related experiences and applying the new knowledge – all with feedback from the instructor.

The experience

Virtually all instructors in both programs focus on adding various methods of active learning to their courses (e.g. in-class and out-of-class case studies, researching best practices based on current refereed articles, comprehensive semester projects, student presentations). This effort helps highlight the level of passion that individual faculty have for teaching and has been rewarded with appreciation from students for their increased confidence in their understanding of complex managerial concepts. Overall at NAU, only one faculty member has presented some resistance; however, this particular faculty member is retiring. From speaking with curriculum leaders in various colleges and departments, it appears that this is a common, but an unfortunate challenge. It is up to unit administrators and faculty – generally through the curriculum committee – to address these and similar situations in the most productive manner possible. In this particular case, the curriculum committee decided that there were enough faculty using acting learning methods for similar learning outcomes to compensate for this shortcoming.

At UH, the administrators regularly review the teaching practices of faculty, encourage faculty to attend various teaching symposia, organize short teaching workshops, nominate faculty for university teaching awards and invest resources in upgrading

technology in the classroom. For a number of years, professors have been able to teach in a more interactive classroom with computer clusters rather than the normal rows of tables and chairs or with an iPad or *iPad pro* while walking around the classroom interacting with students instead of being stuck behind a podium or computer. Students can also share their work on their tablets with their classmates by projecting them via Apple TV. Additional assistance, both at the college and the university levels, is also always available for online courses, such as instructional design, making topic-specific slides, locating topic-specific videos or documents, and so forth. Faculty also regularly meet to share teaching techniques and to help others to solve challenges.

Summary

Part 1 has presented the justifications for implementing a closed-loop assessment of learning outcomes process, plus the steps required to design student learning outcomes, how to create a curriculum map and how to design teaching methods to support learning outcomes. Additionally, each step of the process is followed by the experiences of two hospitality programs. Part 2 will complete the seven steps of the process, including related experiences for each step and end with concluding remarks.

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Appendix. Council for Higher Education Accreditation (CHEA)

CHEA is the primary national accrediting body in the USA. "A national advocate and institutional voice for promoting academic quality through accreditation, CHEA is an association of 3,000 degree-granting colleges and universities and recognizes 60 institutional and programmatic accrediting organizations." www.chea.org/about

12 C. [...] The accrediting organization encourages, where appropriate, ongoing self-examination and planning for change. Such self-scrutiny and planning entail thoughtful assessment of quality (especially student achievement) in the context of the institution's mission. www.chea.org/userfiles/CHEAky224/Recognition_Policy-June_28_2010-FINAL.pdf

There are six major regional accreditors that are recognized by CHEA that serve as the accreditors for the majority of major US universities. Each includes that assessment of learning outcomes in their required standards (see below).

Middle States Commission on Higher Education

2. student learning experiences that are designed, delivered, and assessed by faculty (full-time or part-time) and/or other appropriate professionals who are: a. rigorous and effective in teaching, assessment of student learning, scholarly inquiry, and service, as appropriate to the institution's mission, goals, and policies; [...] (www.msche.org, 2018)

Higher Learning Commission

[...] 4.B. The institution demonstrates a commitment to educational achievement and improvement through ongoing assessment of student learning. 1. The institution has clearly stated goals for student learning and effective processes for assessment of student learning and achievement of learning goals.

2. The institution assesses achievement of the learning outcomes that it claims for its curricular and co-curricular programs. 3. The institution uses the information gained from assessment to improve student learning [...] (www.hlcommission.org, 2018)

New England Commission of Higher Education

In carrying out its accreditation responsibilities, the Commission on Institutions of Higher Education seeks to ensure that its decisions take into account the degree to which an affiliated institution assesses student achievement and student success and uses the results of its assessment to improve its offerings, matters explicitly addressed in the *Standards for Accreditation* [...] (https://cihe.neasc.org, 2018)

Northwest Commission on Colleges and Universities

4.A.3 The institution documents, through an effective, regular, and comprehensive system of assessment of student achievement, that students who complete its educational courses, programs, and degrees, wherever offered and however delivered, achieve identified course, program, and degree learning outcomes. Faculty with teaching responsibilities are responsible for evaluating student achievement of clearly identified learning outcomes [...]

4.A.5 The institution evaluates holistically the alignment, correlation, and integration of planning, resources, capacity, practices, and assessment with respect to achievement of the goals or intended outcomes of its programs or services, wherever offered and however delivered.

4.A.6 The institution regularly reviews its assessment processes to ensure they appraise authentic achievements and yield meaningful results that lead to improvement. (www.nwccu.org, 2018)

Southern Association of Colleges and Schools Commission on Colleges

[...] the process provides an assessment of an institution's effectiveness in the fulfillment of its self-defined mission; its compliance with the requirements of its accrediting association; and its continuing efforts to enhance the quality of student learning and its programs and services [...] (www.sacscoc.org, 2018)

Western Association of Schools and Colleges Senior College and University Commission

[...] 4.3 Leadership at all levels, including faculty, staff, and administration, is committed to improvement based on the results of inquiry, evidence, and evaluation. Assessment of teaching, learning, and the campus environment – in support of academic and co-curricular objectives – is undertaken, used for improvement, and incorporated into institutional planning processes.

Guideline: The institution has clear, well-established policies and practices – for gathering, analyzing, and interpreting information – that create a culture of evidence and improvement.

[...] the institution, with significant faculty involvement, engages in ongoing inquiry into the processes of teaching and learning, and the conditions and practices that ensure that the standards of performance established by the institution are being achieved. The faculty and other educators take responsibility for evaluating the effectiveness of teaching and learning processes and uses the results for improvement of student learning and success. The findings from such inquiries are applied to the design and improvement of curricula, pedagogy, and assessment methodology [...].4.5 Appropriate stakeholders, including alumni, employers, practitioners, students, and others designated by the institution, are regularly involved in the assessment and alignment of educational programs [...] (www.wscuc.org, 2018).

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