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Not too small to be strategic: The state of academic program review guidelines and instrumentation in public institutions

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Abstract

In higher educational settings, the academic program review process allows academic units to solicit feedback, make data-driven decisions regarding effectiveness and sustainability, and report to stakeholders. In order to discover trends and best practices in the current state of academic program review in higher education, examined was a sample of 53 processes representing a range of small-to-large public institutions in the United States in the categories of associate-degree granting, bachelors-degree granting, and masters-degree granting. Using a content analysis methodology, outcomes assessment and the use of data results featured prominently with 86.7% of the sample requiring their incorporation in academic program review, followed closely by judgments of resource adequacy and demonstration of program necessity and efficiency.

Keywords: Academic Program Review, Strategic Program Development

While academic program review (AGR) is a best practice for ensuring academic quality, institutions are moving to make the process more robust by qualifying guidelines and instructions about the process in order to use results for more strategic purposes, such as demonstrating impact. Backlud et al. (2011) note that the American history of academic program reviews is grounded in the assessment and accountability movements started in the 1970s and 1980s, with state legislatures requiring assessment-centered models to demonstrate effectiveness. The Council of Graduate Schools (2005) notes the purposes of academic program review to be, "quality assurance, quality improvement, accountability, identification of strategies for improvement, and information collection and synthesis to facilitate prioritization of resources." Multi-step models are evolving that describe a robust self-study process as involving internal and external expertise to collect and examine evidence that reflects practices, processes, policies, and effectiveness, in response to guidelines or standards such as the Council for Advancement of Standards in Higher Education's (n.d.) seven-step model. Typically, in the most progressive models, after data analysis, actions and strategic planning should allow the academic unit to track changes and demonstrate how it will further its goals. Field-specific models, such as those of the Accreditation Council for Business Schools and Programs (ACBSP, 2017), National Communication Association (NCA, 2009), and the National League of Nursing Accrediting Commission (NLNAC, 2016), are being increasingly used to standardize guidelines, recognize excellence, convey expectations for continuous improvement, and advance the field in teaching, learning, and assessment areas. For academic programs not accredited under a field organization, the expectation of a robust process is expected by regional accreditation bodies, such as the Higher Learning Commission (HLC, 2018), Middle States Commission on Higher Education (MSCHE, 2015), and the Southern Association of Colleges and Schools Commission on Colleges (SACS, 2018), amongst others.

While data elements of a program review may be benchmarked to gauge comparative progress, the collection of program review data points is difficult to compare due to the complexity of data types and purposes for gathering data; the National Higher Education Benchmarking Institute (n.d.) recommends a mixture of over 150 quantitative and qualitative types of data to capture credited program quality and accurately assess needs and priorities. Given institutional and state system pressures, such as a need to justify program continuance, and influences that make each institutional program review process unique, overall measures may also not provide an accurate reflection of program quality due to time, population, and local factors.

The objective of this study was to analyze differences between materials related to academic program review as posted on institutional websites in order to describe the current state of practices. Overall analysis, as well as analysis by institutional type, allowed frequency percentages to argue each element's inclusion as best practice in implementation. A systematic literature review examines aspects of program review in terms of their recognition as important components. Hopefully, this literature review identifies gaps in program review research that have prevented the empirical study from forwarding effective evaluation and identification of best practices.

<div align="center">**Literature Review**</div>

A cyclic academic program review is a focused method for gathering evidence of programmatic practices and policies including inputs, outputs, processes, and mapping between each in a continuous improvement framework. For some institutions and academic field organizations, program review processes are still being formalized, usually to promote accountability, legitimacy and effective change (Sowcik, Lindsey, & Rosch, 2012; Wu & Senior, 2016). Increasingly, field literature is advocating for strong connections between program review and strategic planning in order to impact institutional efficiency (Coombs, 2017). In addition, stakeholders are increasingly advocating for alignment between accreditation standards and academic program reviews to foster resource efficiency and directed action (Bowker, 2017). Perhaps the strongest arguments for deploying academic program review is made by those who have conducted empirical studies linking academic program review activity to policies and practices, such as curricular improvements, staffing realignment, support for an outcomes-based assessment model, and unit restructuring (Dougherty & Reddy, 2013; Novodvorsky et al., 2015; Siems & Bell, 2018), and institutional impacts, such as increased transparency, accountability and productivity (Harnisch, 2011).

Benchmarking efforts as part of the program review process are historically low (Dickeson, 2010), with Deming and Figilo (2016) noting stakeholder difficulty in identifying benchmark categories and scope. Current communications from regional accreditation bodies still provide instruction on basic benchmarking standards for use in academic programs or allowing institutions to explore benchmarking as a quality improvement initiative (Higher Learning Commission, n.d.; Permenter, 2016), so it is clear that the development of a rich set of metrics is still ongoing for a significant portion of institutions. For institutions, the number of empirical studies exploring the effectiveness of academic program review (APR) is low with only 15 directly related recent studies found. Although particular elements of APR, such as outcomes assessment, are well studied, most field literature on APR is theoretical in the form of published guidelines or standards. The selection and weighting of evaluation indicators is difficult; Praslova (2010) used this contention as a justification to adapt Kirkpatrick's (1976, 1996) organizational training evaluation framework.

An important predecessor to this work is Ewell, Paulson, and Kinzie's (2011) comprehensive study of program level assessment practices in two- and four-year institutions. Findings indicated that for both accredited and non-accredited programs, assessment results were used for program review activity more than any other category, including improving curriculum and instruction. Conclusions from that study revealed the importance that field assessment expectations and internal improvement interests have on assessment practice, including the range and frequency of use of assessment practices related to program reviews.

Purpose of program review

Numerous stakeholders within the evaluation field offer perspectives towards the purpose of academic program review. Several institutions and field leaders confirm purposes of maintaining or improving program quality (Coppard, et al., 2015; Drexel University, n.d.; Nugent & LaRocco, 2014; University of Oklahoma, 2009), feasibility, viability, priorities (Morriss-Olson, 2016; University of Illinois at Urbana-Champaign, n.d.), evaluating effectiveness or performance (Backlund et al., 2011; Coppard, et al., 2015; Hanover Research, 2012), and for accountability, reporting, transparency, or data collection purposes (Backlund, et al., 2011; Coppard et al., 2015; Halonen & Dunn, 2017; Henry et al., 2014). Other field stakeholders link individual program reviews to overall institutional efficiency due to organizational dependency (Miller, 2016; Nelson & Nicholas, 2012). Despite program review purpose being well-represented in literature, critics are noting that program reviews may not be meeting institutional needs due to failure to review purposes and policies, or perceptions by faculty participants of authoritarian and non-collegial processes (Bowker, 2016; Turner, 2016).

Program review as a process

Similar to AGR purposes, numerous stakeholders illustrate their understanding of an AGR process that represents best practices to be objective (Dee & Heineman, 2016; Small, 2015), rigorous or systematic (Lopez et al., 2016; Shambaugh, 2017), action-based (Coppard et al., 2015; Henry et al., 2014), and reflective of qualitative and quantitative data (Henry et al., 2014). Field literature and portrayals seem to agree that the process usually involves the institution setting a purpose, stating requirements, and holding stakeholders to a schedule and framework, such as collecting data and gathering input for a self-study (Cornell University, n.d; Hanover Research, 2012; University of Texas at Dallas, 2016). Reported outcomes are expected to reflect analysis with Ryan (2015) suggesting that commonly assessed items that include learning design, content and pedagogy in a feedback-heavy framework with an emphasis on faculty-student interactions. Finally, the field seems to recognize that recommendations, strengths, weaknesses, and opportunities should be identified with internal review to foster stakeholder engagement and external review to validate findings. In fact, the data-driven aspect of AGR may serve as one of its most important processes, especially given faculty concerns about their voices in the decision-making process (Schoepp & Tezcan-Unal, 2016) and the charge of implementing actions based on data (Schoepp & Benson, 2015).

Field literature seems to suggest that process-related elements of program review still lack best-practice models and recommendations with findings from Wickham (2017) that ownership and alternative use of data are issues in some sample populations. In addition, Nicholson (2011) notes that learning or educational theory are infrequently linked to improvement processes.

Stakeholder involvement

Bresciani (2006) noted that higher education's adoption of continuous quality improvement practices may have had the unintended effect of isolating faculty from processes, despite an accrediting body's efforts

to expect or require their participation. With the shift in focus to an expectation that student outcomes are central to academic assessment (Council of Regional Accrediting Commissions (CRAC), 2003), stakeholder involvement has moved from best practice to expected demonstration of nuanced involvement at all process stages (CRAC, 2004) that is increasingly expected to address intellectual, interpersonal and psychological domains (Young, 2018) for broader ranges of stakeholders (Robinson & Demeter, 2017).

Program evaluation criteria

Several field theorists have put forward potential criteria for evaluating academic programs. In an update from his 1999 seminal work, Dickeson (2010) suggested ten (10) evaluation criteria, which receive representation in some form in this study's coding form, that is discussed in the methodology section. Wells and Wells's (2011) ten criteria are also well-represented in this study with the expectation of two specific criteria that were considered but excluded due to lack of findings: per student costs were not typically presented and while graduation rates were presented, many institutions did not clearly present rates in terms of commonly noted four-year, five-year, six-year time frames. In addition, performance funding formulas are having an impact on the mechanisms that higher education uses to addresses budget allocation (Dougherty & Reddy, 2013), so field discussion indicates that impact indicators will have an outsize effect on determinations.

In conclusion, reviewed literature makes clear that due to the complexity of analyzing and benchmarking quantitative and qualitative data sets, academic program review effectiveness is best examined through the effectiveness of its elements, particularly those that reflect outcomes assessment and data-driven decision making.

Methodology

Content analysis is deployed in this research as a robust methodology of qualitative studies, for its flexible way of discovering patterns in data manifestations (Stemler, 2015), and has been widely used in research relating to the presentation of education settings (Leach & Ramachandran, 2018). Data was collected about 53 independent program review processes that represented a diversity of regional settings in small, medium, and large community colleges, state colleges, and universities of the American public education system. Very large public institutions were excluded from the study due to pilot findings and field literature (Audretsch, 2014; Geiger, 2017; Johnson et al., 2016) that suggested that the independent structure of individual colleges with their inherent research structure and robustness of funding, including commercial and technological partnerships, means that APR will reflect strategic development of the college unit instead of the institution. Therefore, to maintain focus on institutional strategic development, the convenience sample consisted of public institutions of six states representing the United States regional categories with the listing culled from the appropriate state department of education, deploying a convenience selection of three institutions from each institutional category of associate-degree granting, bachelor-degree granting, and masters-degree granting. Inclusion in the sample mandated at least one relevant finding; therefore, findings presentation will be in terms of prevalence. All materials collected were from public areas of institutional websites in order to inform discussion on the transparency of the process. As Volkwein (2010) confirmed, most higher education institutions have an APR system in place; however, the materials guiding that process may not be public, hence the need for convenience sampling method. Although search terms involved "program review," "self-study," and extensive searches of Academic Affairs pages, the scope of this investigation also included degree and major reviews, as long as it was clear that the review was a comprehensive study that included outcomes

assessment and was intended as a review that considered program viability, not just an evaluation of departmental effectiveness. Consensus between raters confirmed that each evaluated artifact was within the defined scope of the study. Each coder was assigned to independently code each site; interrater reliabilities were calculated with an average of κ = .70 (Stemler, 2004). Inclusion of the prevalence findings presented in the next section was contingent on the level of agreement between coders.

The coding instrument developed through three iterations: the first version developed in response to the literature review findings and the second developed to adapt to a pilot study of six program review processes culled from institutions of the reviewer's home state. The end of the pilot study yielded the final instrument, which reflects active findings of the field. Items on the coding form included categories about the purpose of the program review, designated roles and responsibilities of stakeholders, related timeline information, provision of a program or departmental vision or mission, and information regarding review of past recommendations. The form also sought information about program student learning outcomes, program description and history, program goals, outcomes, and curriculum mapping. Other items on the form sought program demographics such as enrollment, student diversity, faculty profiles, as well as information about faculty research and advising interests. A category of effectiveness indicators relating to budget, benchmarks, resource allocation, facility, staffing, and technology adequacy was also cataloged. Finally, program strategic and action planning, overall functioning, leadership and policy development, and the use of indirect measures formed categories. A meta-information section sought information about internal and external reviews, scheduling, sponsorship, and portfolio requirements. Most ratings were dichotomous (required or not required), with significance calculated from the frequency. Two coders, a research professional, and a student trained in the use of the coding instrument completed the evaluation of program review information.

Table 1 – Meta information about the program review

	All		Associates	Bachelors	Masters
Self-study	88.6%		66.6% proposals	17% proposals	0% proposals
Purpose	83%		44% not provided		
Quality	49% (26)		15% (7)	15% (7)	23.4% (11)
Accountability	35.8% (19)		8.5% (4)	10.6% (5)	10.6% (5)
Effectiveness	30% (16)	**OF**	12.7% (6)	8% (4)	15% (7)
Guidance	26.4% (14)	**THOSE…**	10.6% (5)	10.6% (5)	17% (8)
Student Achievement	15% (8)		6.3% (3)	6.3% (3)	15% (7)
Time frame (average)	5.3 years 17% not provided;		3.47 years 55% not provided	5.83 years	5.33 years
Assemble as a portfolio	40% (18)		27.7% (5)	39% (7)	33.3% (6)
Sponsorship		**OF**			
Academic Affairs	51% (27)	**THOSE…**			
Committee	19% (10)				
Ins. Effectiveness	11.3% (6)				
Other	19% (10)				
Public posting of review schedule	39.6% (21)		38% (8)	19% (4)	43% (9)

Table 2 Required Component of program review

	All		Associates	Bachelors	Masters
OA data results	86.7% (46)		30.4% (14)	34.7% (16)	34.7% (16)
Resource analysis	75.4% (40)		35% (14)	32.5% (13)	32.5% (13)
Program necessity	75.4% (40)		40% (16)	27% (11)	32.5% (13)
Stated SLOs	73.5% (39)	**OF THOSE …**	30% (12)	38% (15)	30% (12)
Vision\Mission stated	69% (37)		24% (9)	32.4% (12)	43.2% (16)
Enrollment	69% (37)		37% (14)	40.5% (15)	21% (8)
Faculty demographics	67.9% (36)		19% (7)	44% (16)	36% (13)
SWOT analysis	67.9% (36)		30.5% (11)	36% (13)	33% (12)
Program description	66% (35)		25% (7)	34% (12)	40% (14)
Internal review required	66% (35)		34% (12)	34% (12)	31.4% (11)
Long-term planning	62% (33)		27% (9)	33% (11)	40% (13)
External review required	62% (33)		21% (7)	36.3% (12)	42.4% (14)
Modalities of learning	56.6 % (30)		26.6% (8)	36.6% (11)	36.6% (11)
Student demographics	54.7% (29)		27.5% (8)	34% (10)	38% (11)
Staffing levels, HR plan	51% (27)	**OF THOSE …**	33.3% (9)	33.3% (9)	33.3% (9)
Stated program goals	47% (25)		32% (8)	36% (9)	32% (8)
Fiscal soundness	40% (18)		27.7% (5)	27.7% (5)	44.4% (8)
Use of indirect measures	40% (18)		44.4% (8)	33.3% (6)	22% (4)
Use of benchmarks	32% (17)		41% (7)	35% (6)	23.5% (4)
Review of past actions	28.3% (15)		26% (4)	40% (6)	33% (5)
Program history	28.3% (15)		20% (3)	33% (5)	46% (7)
Research, scholarly or creative activity	24.5% (13)		15% (2)	46% (6)	38% (5)
Advising activity	20.7% (11)		9% (1)	36% (4)	54% (6)
Leadership evaluation	19% (10)		10% (1)	20% (2)	70% (7)
Curriculum map	13.2% (7)		42% (3)	57% (4)	0% (0)

Results

In Table 1, 88.6% of the sample use a self-study program review methodology with the remainder deploying a proposal justification structure; 66% of proposal structures were found at associates-granting institutions. Seventeen percent of the sample did not publically provide a purpose for conducting self-studies. Improving quality and providing accountability, followed by improving effectiveness, consistently emerged as the most important program review purposes for all institutions and across all institutional categories; some categories show over 100% as many institutions listed multiple purposes. An average was computed regarding APR time frame with the finding of a longer time frame for field-accredited programs and a shorter time frame for new programs and non-accredited programs. Associate degree-granting institutions had a significantly lower time frame than the other categories, substantiated by their

greater use of a proposal structure over a self-study structure. Sixty-nine percent of sampled institutions require the APR to address vision\mission-related issues, such as how the department's vision\mission aligns with the institutional vision\mission. Of those, 24% of associate-granting institutions require APR to address, with 32.4% of bachelor degree-granting, and 43.2% of master's degree-granting institutions requiring APR to address. After the time frame category, Table 1 shows the most popular required APR components listed in order of significance. Due to the prevalence of findings, three different categories related to resources (which included the address of adequacy of facilities, technology, and support services) merged into one resource category. Strategic or long-term planning is listed separately from action, or short-term planning, due to expectations of tracking effectiveness.

Discussion

In general, with over half of this study's identified components being required in at least 60% of the sample, it seems the field is incorporating program review complexity at greater levels than previous studies found, such as Wu and Senior's (2016). One significant departure is from Conrad and Wilson's 1986 study, which found four models of program review: goal-based, responsive, decision-making, or connoisseurship. While this study's findings included elements of all of these, most program reviews have expanded in size and scope to incorporate multiple perspectives; in fact, coding instrument modification removed identification of a singular model due to multiple findings per institution.

Meta-data findings of an average time frame of 5.3 years for academic program reviews are confirmed in the field literature (Coombs, 2017; Hanover Research, 2012). Regarding the purpose, four main categories (curricular improvement, use in decision-making, accountability, and data-driven) emerged in the studied sample, which despite the passage of 14 years, remained in similar percentages of significance as Allen's (2004) early study. Bers' (2011) recognition of five models of program review were fairly well represented in this study, with findings that 56% of the sample deployed an External Evaluation or Self-Study Focus Program Review, 33% used a Mixed Program Review, and 11% arranged a Standardized Program Review; only Ber's Outside Expert Program Review and Free-Form Program Review did not receive representation in this study.

While meeting accreditation expectations is still the most important reason for examining assessment evidence (Kuh, Jankowski, Ikenberry, & Kinzie, 2014), this study's findings of evidence-based short- and long-term action and strategic planning indicates that internal uses may be developing into a robust driver of assessment purposes. Bers (2011) recognized the importance of a program description section in a program review, along with a mission and purposes section which was also favored by 88% of this sample's institutions, theoretically providing a rational for program review. In addition, this sample seems to support Ewell, Paulson, and Kinzie's (2011) findings that quality improvement (49%) and accountability (35.8%) are key reasons for undertaking program review.

The validity of using achievement of student outcomes as a measure of assessing program assessment, as demonstrated by 87.6% of the sample in this study may indicate the prevalence of the practice in American higher educational settings. While other settings, including Greece and Macedonia (Tsinidou, Gerogiannis & Fitsilis, 2010; Zoran et al., 2013), deploy indirect methods, such as satisfaction, as a more important quality determinant, the American model may be gaining ground. Recent evidence indicates the adoption of the American model outcomes assessment in Brazil (Melguizo & Wainer, 2015) and European countries with an elevation of vocational education as a higher educational concern and the role of education in social equity issues (Skolnik, 2015). Kuh, Jankowski, Ikenberry, & Kinzie's (2014) finding that provosts rank national student surveys as one of the top two methods for assessing student

outcomes may indicate a change in assessment direction. Recent field studies indicate that the use of outcomes-based assessment is driving improvements in the curriculum (Tam, 2014) and adoption of a wider range of assessment tools and measures (Kuh et al., 2014). Despite the prevalence of learning outcome usage, it is clear that faculty need continued professional development in learning outcomes assessment (Schoepp & Tezcan-Unal, 2016).

With 73.5% of institutional program reviews in this sample requiring a statement, review of, or address of student learning outcomes, this study aligns with field data which finds that 84% of institutions deploy general education student learning outcomes (Kuh, Jankowski, Ikenberry, & Kinzie, 2014). In addition, Kuh, Jankowski, Ikenberry, & Kinzie's, (2014) finding, that only 40% of academic program SLOs are aligned with institutional SLOs, serves to highlight the importance of this study's emphasis of APR's role in the strategic development of the overall institution.

Sample findings regarding a significant number of program reviews requiring identification of unique program attributes seem to align with the field theory that links such characteristics to the program impact on the community (Chalmers & Di Gardiner, 2015; Moffatt-Bruce, et al., 2017). This study's findings, that 40% of the sample include some type of resource analysis, highlights the importance of strategically managing resources in environments taxed by funding instability, which is the basis for the rise in performance-based funding mechanisms in the states. Recent research underscores the impact that performance-based funding has on programs with Hillman, Tandberg, and Fryar (2015), linking the policy to an increase in short-term certification production. Coombs' (2017) findings of poor documentation for departmental accountability for implementing feedback is related to this study, which ranked incorporation of feedback at only 40%.

Regarding program review's role in strategy development, this study's findings of 62% representation show that the field is moving to a two-factor business model of market share and growth as advocated by Fannin and Sran (2017). It is clear that this study's implementation would agree that the centrality of the program to the university and surrounding community are important considerations in program strategic planning as advocated by Bers (2011), and Wells and Wells (2011). While this study makes clear that academic departments do not typically make the difficult call for continuation, an obvious undeclared purpose of program review is for the departments and programs to make the case for continuation. In their literature review, Fannin and Saran (2017) argue that the failure to present relevant evidence is the most prevalent reason for program review failure, with Harper and Vernon (2011) seeming to concur with their linkage of success predictors to strategic importance and impact. While accreditation activity may drive the desire to perform programmatic assessment (Kuh, Jankowski, Ikenberry, & Kinzie, 2014), only 28.3 % required explicit address of accreditation information in the self-study.

Areas for Future Research

Despite the prevalence of academic program review, this study found surprisingly few empirical studies that examine its effectiveness or role in strategic development in higher education, which seems to align with field findings of a paucity of research in higher education sustainability studies (Chiong, Mohamad, & Abdul-Aziz, 2017). One theory is that faculty members have a limited amount of research time in addition to their teaching, advising, committee, service, publication, and other work, and, therefore, wish to engage with research topics tied directly to a field of study or industry, rather than reflect back on organizational structures of higher education: topics devolved into by field theorists Darbyshire, Gustafsson, and Mullersdorf (2015). Another theory is that the recentness of robust organizational structures development in international higher educational settings indicates a previous deficit in a

population of people available to perform reflective study. Baltaru and Soysal (2018) and Ramirez and Tiplic (2014) would seem to confirm with their cataloging of a recent trend rise of administrative positions and effort in European higher education. Finally, field theorists indicate that historical attitudes of academic knowledge production and resultant lack of funding and productive research climate have impeded overall scholarly production, including that of reflective empirical study (Abouchedid & Abdelnour, 2015; Darley & Luethge, 2016; Musiige & Maassen, 2015).

Conclusion

It is clear that accreditation and external pressures are forcing higher education to respond to calls for transparent and effective decision making, including support or disengagement of programs that may or may not best serve public interests, such as the development of a modern workforce. While academic program review is a systematic process, the guidelines and structures that support it are informed by the development of best practices. The growing complexity of evaluation guidelines and instruments into a self-study structure reinforced with an independent external review component shows that institutions are attempting to tie the academic review process more strongly to data collection and strategic decision making over previous continuance proposal structures. This study helps make clear that outcomes assessment, and its emphasis on data collection for decision-making purposes, has turned the tide from a best practice to an expected practice. For stakeholders wishing to improve their processes, ensuring that their data collection techniques are robust, planning processes address multiple stakeholders, and personnel has sufficient resources to conduct a thorough review, which will help ensure that those achievements are evaluated objectively and that strengths and weaknesses reveal potential for direction shift.

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