Examining Institutional Transformation Through Self-Review

Marilee J. Bresciani, Ph.D.
North Carolina State University

Abstract

When trying to determine whether assessment has improved the level of decision-making, participants frequently fall into the old traps of counting various types of activities. For instance, one could use dashboard indicators such as number of assessment plans completed, number of assessment workshops presented, and number of assessment-related publications to determine how much assessment an institution has generated. Another way is to see if there is evidence of decisions based on assessment results that influence improvement of programs. One could also examine the process of assessment and determine how many programs have actually implemented rigorous self-evaluation.   Still, another way is to assess the degree to which the institutional culture has been transformed by evidence based decision-making practices. This article will describe a particular means of assessing the assessment process that has been implemented at North Carolina State University, United States of America. Examples of data found from one means of analysis and recommendations generated as a result of findings will be presented.

Introduction

According to the American Council on Education's publication on institutional change and transformation (Eckel, Green, and Hill, 2001)*,* some of the aspects of assessment that institutions should evaluate include the following transformational characteristics:

- Shared purpose
- Collaboration across the institution
- Leadership/commitment from administration and faculty
- Rituals, practices, symbols
- Education, support, reward, recognition
- Evidence of depth and pervasiveness
- Sustainability

In order to bring meaning to these descriptors, turn to the work of Cecilia Lopez (1997, 2002), Peggy Maki (2001), Banta (2002), Palomba and Banta (1999), Ewell and Jones (1996), Lorie (1977) and Eder (1999). These scholars have described how to determine whether an institution's commitment to continuous assessment has had a positive impact on that institution's ability to incorporate assessment into its institutional culture in order to transform student learning. In other words, once one has understood what it means to transform an institution, what does it look like when assessment results used for meaningful decision-making have altered that institution's practices?

Each aforementioned transformation aspect will be defined and discussed in terms of what it may mean in regards to assessment at North Carolina State University and what kinds of evidence could be gathered at each institution in order for that particular aspect to be assessed. Before each transformational aspect is described, it may be important to discuss why this assessment of assessment approach would be valuable.

Why This Approach?

It is no secret that many higher education faculty and administrators are frustrated by the misuse of performance indicators (e.g., graduation rates, retention rates, acceptance rates), often used to describe the quality of academic programs. Most higher education administrators have not taken the time to dig for deeper, more meaningful information, and as a result, well-trained constituents (e.g., parents, students, legislatures, institutional board members, donors, and possibly auditors) who respond to fluctuations in these indicators are ever present. While these indicators do have meaning, they have limited meaning in the conversation of improvement of programs and direct quality of education. For instance, does a slight drop in enrollment correlate with a drop in program quality? It is difficult to know specifics about program quality based on the quantitative evidence of enrollment figures, as fluctuations in enrollment figures may be more indicative of economic fluctuations on demand for majors rather than program quality. Thus, if administrators or other decision-makers want to have a more informed conversation about quality, different types of information are needed.

The same is true for the assessment of the assessment process. One could speak of the value of assessment programs in terms of number of assessment plans turned in and number of assessment workshops held; however, would one really be getting to the *quality* of the assessment process if only those terms were discussed? And again, if these types of indicators were only counted, would program administrators be setting themselves up for misleading and perhaps even meaningless decisions based on numerical fluctuations? For example, if the number of assessment plans turned in one year decreased because the faculty were busy collecting more direct evidence of student learning, what would that decrease in itself actually indicate? Would administrators even be able to speak of how student learning was improving if they only counted the workshops provided on course-embedded assessment?

The purpose of this approach to assessing assessment in terms of how much it has become embedded into the institutional culture allows one the freedom to implement assessment in the manner that makes assessment most successful. That is, it allows one to implement assessment in a manner that gives programs the flexibility and autonomy they need in order to make their programs and processes successful. It also allows for implementation of quality review in a way that makes the process and decisions-made sustainable, lasting beyond any accreditor or auditor's visit. While counting assessment plans is achievable and its results can be particularly easy to showcase if your accreditation or audit visit is around the corner, measuring the extent to which your process has a shared purpose among faculty and the extent to which it is sustainable will most likely be far more revealing about your institutional culture and its commitment to improve the quality of its programs.

The Characteristics Involved in "Measuring" Assessment

The characteristics examined in order to determine whether assessment is transforming the institutional culture for student learning are outlined below. While this paper does not focus on how these characteristics are implemented (see Bresciani, Griffiths, and Rust, in

press, for those details), it does illustrate briefly what qualities could be explored and thus examined. A detailed rubric for these characteristics can be found at http://www.ncsu.edu/undergrad_affairs/assessment/files/evaluation/meta_analysis_rubric.pdf.

Shared Purpose
In regards to assessment, Maki (2002b) states that the shared purpose of assessment among faculty starts with innate intellectual curiosity about what works and moves toward making a commitment to continuous improvement. Once a shared purpose of assessment is established at an institution, participants can move forward with conversations derived from innate interests of the faculty and their desire to improve what they do. The commitment toward continuous improvement can be seen in decisions that improve student learning as well as the assessment process. The decisions derived from a commitment toward continuous improvement lead to a far different atmosphere than one that desires to engage in evaluation solely to prove a program's worth. A continuous improvement atmosphere, where faculty develop and grow with the assessment process, realizing the value and benefit of its continuous, iterative nature and the impact it has on improving student learning allows for the institution to become more transparent in its practice, thus improving its accountability (Allen & Bresciani, 2003).

Characteristics that define ***shared purpose*** include the presence of:
- Common Language for Assessment
- Shared Conceptual Understanding of Assessment
- Improved Student Learning
- Assessment Plans
- Evidence-based Decision Making
- An Expectation to Conduct Assessment
- Shared Institutional Objectives or Outcomes/Institutional Learning Principles/Educational Values

Collaboration
The process of Undergraduate Academic Program Review (UAPR) at North Carolina State University began among the faculty, and its support resonated primarily from the Division of Undergraduate Affairs. However, historically, the Campus Writing and Speaking Program, the Faculty Center for Teaching and Learning, the University Planning and Analysis office, and individuals within the Colleges have also supported outcomes-based assessment program review in their various ways. The current process asks that each of these programs collaborate with each other, share resources, and even make resource requests together in order to support the overall undergraduate academic program review process and resulting improvements in student learning. In addition, assessment professionals from various colleges have been extremely valuable in moving the process forward and in providing support to others outside their colleges.

Characteristics that define ***collaboration*** include the presence of:
- Collaboration among Units to Engage in Assessment
- Invitation to all Units to Engage in Assessment

- Flexibility among all Units for Incorporating Assessment into their Day-to-Day
- Shared Resources among Units

Rituals, Practices, and Symbols

When looking for the extent to which a cultural transformation has occurred, it is common to look for cultural rituals, practices, and symbols (Maki, 2002a). One ritual and practice that many institutions employ, such as Appalachian State University, are assessment days. These are days that the faculty and administration collect assessment information from students. Other characteristics include:

- Annual Awards that include Assessment as a Criteria
- Showcasing of Assessment Accomplishments
- Program Documentation (e.g., meeting minutes, website)
- University Documentation
- Participation in the Assessment Process

Leadership Commitment

Key faculty and administrative commitment to the outcomes assessment based program review process needs to be evident. NC State would not have the process it now has if it were not for the dedication of years of leaders who began to create the expectation for evidence-based decision-making and those who were guided by their natural inquiries about their disciplines and its application to teaching and learning.

Characteristics that define ***leadership commitment*** include the presence of:

- Evidence of Leadership using Data for Decision-Making
- Evidence of Leadership using Data for Providing Rewards for Improved Learning
- Provision of Resources to Faculty and Administrators (e.g., training on assessment, assessment plan review, tools, analysis, support with documentation, use of evidence)
- Administrator's Authorization of Services and Personnel for Assessment
- Faculty Authorization of Services and Personnel for Assessment
- Balance in Leadership between Faculty and Administrators
- Faculty and Administrator Advocates for Improvement of Student Learning

Reward and Recognition, and Education and Support

It is in the areas of education, support, reward, and recognition where NC State has spent a great deal of time defining and implementing. In discussing this category, one will see a great deal of overlap between it and the previously mentioned categories.

Reward and Recognition indicators include:

- Participation in Assessment Symposium and Other Conferences
- Publications
- Awards
- Use of Results
- Recognition of Administrators and Faculty Accomplishments
- Celebrations of Lessons Learned

- Promotion and Tenure
- Motivation

Education and Support characteristics include:
- Evaluation of Assessment Plans
- Participation in Assessment
- Workshops
- Website
- Use of Results - Planning
- Use of Results - Budgeting
- Administrator's and Faculty Responsiveness
- Budget Identified
- Funding Delivered
- Budget for Improvements Identified
- Information about Assessment is Communicated

Depth and Pervasiveness

Maki (2002a) states that one of the signals of a cultural shift or change is not only that there is depth but that there is also pervasiveness of interest and engagement in assessment and improved student learning, through the rights and rituals, through the language, and through the conversations that occur on a particular campus. In order to see whether this pervasiveness is occurring, one must look at the number of people and type of positions involved in the process. One must also examine the following:
- Faculty Engagement
- Faculty Collaboration
- Faculty Support
- Faculty Education
- Faculty Exploration of Improved Student Learning
- Faculty Use of Results
- Administrator's Engagement
- Administrator's Collaboration
- Administrator's Support
- Administrator's Education
- Administrator's Exploration of Improved Student Learning
- Administrator's Use of Results
- Student Involvement

Sustainability

Peggy Maki (2002a) states that when investigating whether there is a strong and sustainable commitment to assessment, one of the things she looks for is whether principles of commitment have been articulated either in the way that the assessment process was founded or in the way the institution is implementing it. She inquires as to whether a document exists that addresses the purpose of committing to assessment, not solely to satisfy external bodies but because there is an interest in finding out how students learn. In addition, is there a commitment to supporting on-going faculty training

in review methodology and interpretation of findings for effective decision-making? At NC State, there is such a document and a website that describes the process, the history of the process, and the philosophy and concept behind it. In addition to documentation, the following qualities can be examined.

- Flexibility of Process
- Continuous Improvement of Student Learning
- Diversity of Process
- Systematic Documentation of Findings
- Meta-Analysis
- Program Evaluation
- Evaluation of Decisions Made
- Resources
- Habits
- New Hires that Require Assessment Expertise or Training
- Methodology/Process Fits Needs

Evaluation Methods

Several various types of evaluation methods were used to determine whether the aforementioned characteristics were identifiable. Some of them, understandably, were much more effective than others. Such methods included:

- Observations (meetings, workshops, phone calls)
- Document Analysis (emails, meeting minutes, website, assessment plans, assessment impact reports, syllabi)
- Survey analysis using descriptive statistics, spearman correlations, and stepwise regression
- Self-Evaluation by Faculty and Administrators
- Evaluations of Assessment Plans
- Workshop Evaluations
- Testimonials from Faculty
- Website Utilization Statistics
- Documentation Usage Evaluation, and
- External Evaluators

Detailed analysis findings of the assessment of assessment can be found at
http://www.ncsu.edu/provost/academic_programs/uapr/assess/assess.html
http://www.ncsu.edu/undergrad_affairs/assessment/files/evaluation/evaluation.htm
http://www.ncsu.edu/undergrad_affairs/assessment/files/projects/units/assess.htm

Survey Administration and Population

For the purpose of this paper, the findings presented on each characteristic are from a web-based survey administered to approximately 1,029 full-time undergraduate faculty in mid spring of 2004. The invitation to participate in the survey was sent by email from the Provost. Completion of the survey was voluntary and the identity of each participant was kept confidential.

Several faculty had incorrect email addresses, so the size of the final population decreased to 942. All 942 faculty received email invitations to take the survey. The survey was in the field for four weeks and no incentives were offered for completion of the survey. The response rate of 27% is low, yet acceptable for making recommendations for improvement of the assessment process.

Because faculty identities were not purposefully tracked when they completed the survey, it is difficult to tell the representative nature of the faculty as a whole by race, gender, or faculty level. However, faculty were asked to self-report the college from which they came.   Through a chi-square analysis of this data, it was determined that each college was significantly represented. Some of the colleges did have low N's and thus, the researcher cautions for interpretation surrounding generalization of the data.

Survey Design
The survey design is based on constructs of the previously described transformational characteristics. Higher education doctoral students and the principal investigator collaboratively developed the questions two years ago.   The survey was pre-tested on more than a dozen faculty members and the committee of faculty responsible for implementation of undergraduate program review, and refinements were made. Refinements were also made after the first full administration of the survey in spring 2003.

In order to reduce the size of the survey and thus the survey completion time, the full instrument was divided into four questionnaires based on pre-existing section organization. All four versions of the survey were placed on the web. One-fourth of the full-time faculty population were randomly selected and directed to survey A in the email invitation; the other fourth directed to survey B, and so on.

Reliability
Scale reliability was assessed by calculating coefficient alpha. Reliability estimates were obtained for the following scales: "Shared Purpose" (*alpha=0.84, up from 0.76 in the previous year*), "Collaboration across the institutions" (*alpha=0.70, up from 0.60 in the previous year*), "Reward and Recognition " (*alpha=0.47, up from 0.40 in the previous year*), "Education and Support " (*alpha=0.98, up from 0.97 in the previous year)*, and "Depth and Pervasiveness" (*alpha=0.72, up from 0.70 in the previous year*).

Methodology
Four weeks after having the web-based survey in the field, the survey was pulled and analyzed. Descriptive statistics, Spearman correlations, step-wise regression, multi-collinearity analysis, and scale reliability analysis were run. Open –ended responses were coded using open, axial, and selective coding (Strauss and Corbin, 1990). The results of this analysis follow.

Findings and Discussion
In summary, the following points are offered for each category. As previously
mentioned, there is crossover in some of the constructs.

Shared Purpose
While 81% of the faculty report that they are intrinsically motivated to improve student
learning, responses range from 74%-80% in regards to faculty using assessment to
improve student learning, teaching, course design, and curriculum design. Interestingly,
only 62% of the faculty state that their department widely publicizes their expectations
for student learning.

Overall, North Carolina State University faculty report a 75% agreement with the
Statement that "A major focus of assessment in my department is to demonstrate the
extent to which we are improving student learning". However, only 47% of those same
faculty report having a shared understanding of the assessment process.   Yet 63% report
having used the assessment data to make decisions for continuous improvement.

This difference in some of these percentages may be explained by the report that only
47% of the faculty discuss in departmental meetings what they have learned and what
they have changed as a result of their assessment findings. Further explanation may be
offered by the report that only 36% of these faculty describe that their department faculty
who are unfamiliar with their departmental assessment process are informed about the
value of this process.

This apparent disconnect of intrinsic desire to improve student learning with the
engagement in actual assessment practice and the value of that practice may be due to a
breakdown in common language used among faculty. In other words, faculty may be
sharing in departmental meetings what they have learned as a result of their assessment
practices, but they may not be labeling it as assessment and therefore the connection of
informed decision-making to the value of assessment is lost.

Another explanation may come from the open-ended result analysis where faculty
reported the theme that the assessment process may have been made "too systematic".
While improving student learning is valued and faculty report engaging in such a process,
the formalization of the process is perceived to be too cumbersome and thus some faculty
may be refusing to participate or simply not reporting their less than systematic means of
engaging in the evaluation of student learning. While some faculty hesitated to outright
state that the current process was too cumbersome, they questioned whether the time
invested was really worth what they were getting out of it. Again, the researcher
perceives this not to be a question as to whether student learning should be evaluated but
whether the formalized process for that evaluation is too "costly".

This raises the question as to whether shared purpose at this University is truly present.
If one holds true the assumption that time is spent where one's values reside, then is this a
question of whether too much time spent on improving student learning or is it a question

about how much time should be spent on improving student learning given apparent competing interests, such as research and grant-writing?

While not present in the questionnaire, a document analysis of reports illustrates that during the high-level leadership changes, questions have been raised by the high-level leadership as to the value of assessment. Surely, given these questions and diminished statements about the value of assessment, shared purpose would indeed be expected to decline.

Collaborations
Collaborations across departmental lines have not increased from the previous year, in accordance with the survey data. Only 27% of the faculty agreed to having worked collaboratively with faculty in other departments to assess and/or share findings about student learning. Yet, 60% of the faculty desire to see examples of other facultys' work on assessment. The latter may be due to a desire to see what information can be shared or what tools can be borrowed or it simply may be due to a desire to see "how the paper needs to be written." In other words, faculty are requesting to see examples of other assessment work so they know how to best prepare their documentation.

While not present in the questionnaire, another reason for declined collaborations may be due to several leadership changes and thus, new leaders are just now establishing relationships with the hope to leverage collaborations in the future. Collaborations may further be exasperated as NC State faculty and administration are going on the fourth year of not receiving salary increases. During times of fiscal crisis, one may expect collaborations to increase, however, it may be that an attitude toward that of "survival of the fittest" is becoming apparent, and thus, there is less energy for identifying and pursuing potential collaborations.

Rituals, Practices, and Symbols
Over 70% of faculty report that assessment findings should be celebrated on the website, yet less than 20% are engaged in this practice and only 34% state that they communicate their assessment results and decisions to the rest of the campus community. While time may be a factor for not posting findings on the website, concern about publicly sharing data may be the more compelling reason for this data discrepancy. Furthermore, there is suspicion as to whether the process is being used by the administration for another reason other than the improvement of student learning. This may also attribute to faculty resistance in sharing their results publicly. The concern over transparency in communicating how assessment is practiced and what may be learned is apparent in the open-ended responses as well.

The "use of data" concerns seem to cause the faculty to question the value of this category all together. It may be that this formative assessment process is too new to the University and therefore, the administration and faculty simply have not had time to create rituals, practices, and symbols that have deep meaning. Or as previously mentioned, the leadership turnover may mean that rituals, practices, and symbols have not been created despite those illustrated on the comprehensive assessment website.

While the website belonging to this process is wide-ranging, less than 1/3 of the faculty report the website to be of value in moving the institution forward in this area.

Leadership/Commitment

North Carolina State University has experienced intense turnover in leadership, and thus, challenges from faculty to the administrative leadership have become more apparent. The open-ended responses were indicative of faculty questioning how the leadership was using the results of this process, whether the process was even being evaluated, and whether the administration really understood what the process involved. Furthermore, as previously mentioned, there was skepticism in whether the administration had plans to use the results from the assessment process for something other than improving student learning.

Statements from leadership and visible support of the process, possibly through the establishment of indicators contained in the *Rituals, Practices, and Symbols* category, may improve faculty's perceptions of leadership commitment to the concept of improving student learning. It seems that consistency over time in how the data is used and how the process is supported may be the facultys' only convincing indicator of commitment from the leadership.

The more difficult concern seems to be how to address the faculty's perception communicated in open-ended responses that the leadership is more concerned with what the regional accreditor is requiring of the process, rather than what is meaningful to the faculty. While faculty designed the current process and guidelines, and while faculty feedback refined the process and the guidelines, many faculty remain suspicious of administrative and accreditor influence in the design of the process. Many faculty remain suspicious of whether their voice will continue to be heard and considered as the process continues to evolve.

Carefully constructed opportunities for productive feedback from faculty must be maintained in order, over time, to reduce this concern and better demonstrate the leadership commitment to the process. If leadership continues to change at the rate it has in the past, this trust may take even longer to establish.

Reward and Recognition and Education and Support

The discussion of the categories of reward and recognition and education and support has been combined in order to better facilitate interpretation and practice. As noted earlier, the scale reliability for these two categories varied and that may be due to a variance in faculty perception, because as this data illustrates, faculty may not value the rewards and support that this institution has provided

So, while 81% of the faculty report that they are intrinsically motivated to improve student learning, only 15% report that contributions from assessment to their programs are rewarded within the department. Of the nearly half of the faculty who identify value in the following rewards and recognition, less than or equal to 25% report that they actually engage in:

- presenting their findings at national conferences,
- using assessment in departmental university promotion and tenure process,
- reporting their findings and decisions made on their departmental websites,
- awarding grants, research release time, or stipends to conduct assessment,
- allocating funds to improve learning made evident by assessment findings, or
- providing a letter of recognition for their service on assessment committees/teams.

The most desired rewards included sharing the assessment findings in public places (67%), providing funds to improve programs based on assessment findings (60%), and sharing results of assessment practices in departmental brochures (57%). Interestingly, using assessment in departmental promotion and tenure processes was reported as an important practice by only 48% of the faculty.

When asked what resources could be provided to faculty in order for them to engage in or improve their process of evaluating student learning, the most needed resources were receiving matching mini-grants to engage in assessment (45%) and use of the trained faculty facilitators to assist in learning about the assessment process (47%). Other resources that had already been provided such as a comprehensive website, an electronic assessment tracking system, and workshops were reported to be valued by around only a third of the faculty and used by less than a quarter of the faculty.

These are fascinating findings and to some extent there is little differentiation between rewards and support to facilitate the process (e.g. matching mini-grants). Such items as matching mini-grants and funds to improve the program in the manner that assessment results detail requires actual dollars and thus they must be re-allocated accordingly. Currently, only 22% of the faculty report being able to use college funds to support training in assessment.

However, to provide a valued resource such as trained faculty facilitators requires very little investment of actual dollars and more in reallocation of the duties of those faculty members. This reallocation of duties may require dollars for course-buy-outs, yet it may also mean administrative duty reallocation or simply, removing some current administrative work expectations that may not be necessary.

Most interesting to note is the lack of interest in workshop and website resources. While these are often easy resources to provide, they did not appear to be valued by more than a third of the faculty and thus, should be examined for their cost. However, their apparent lack of value may also reside in the fact that this university has been providing these types of resources consistently over four years and thus these resources may now be being taken for granted or simply less needed.

Evidence of Depth and Pervasiveness
63% of the faculty report using the evidence gained from assessment to improve their programs, yet only 15% say that this practice is rewarded in their department. If rewards are needed to sustain the process or to demonstrate that it has value, then this university

will need to address this statistic. If however, the lack of rewards will be perceived as a sign that this process is still valued, then maybe depth and pervasiveness will continue. Sixty-seven percent (67%) of the faculty report that engaging in assessment does cause them to reflect on how their students learn and if that is the purpose of assessment, then depth and pervasiveness bode well.

Yet, if depth and pervasiveness are to increase, than faculty must continue to learn about the process. 36% of these faculty state that other faculty within their department who are unfamiliar with this process are taught about the process and only 32% of the faculty include assessment expectations in their orientation materials. This may be an acceptable percentage to maintain depth and pervasiveness, yet it also may not be. Time will most likely indicate the impact of not training this size of the population.

Sustainability
Faculty report in the open-ended questions that if this process is not recognized in the university's promotion and tenure guidelines, then it cannot be sustained. Yet, only 48% of the faculty felt this was an important reward. Is the difference in the percentage verses the overwhelming theme emerging from the open coding related to varying opinions among tenured and non-tenured faculty?

Faculty also reported that if they do not receive funds to implement the process or the resulting recommendations, the formative evaluation of student learning cannot be sustained. Only 39% of faculty reported that assessment findings are used to inform departmental budget allocations; 38% to inform reallocation of internal resources; and 44% to request external funding. It seems apparent that for many of the rewards that are reported to be of value by the faculty, resources will be required to fund them. Therefore, sustainability may rely on an increase of assessment informed budget practices, as well as assessment informed external requests for funds.

Finally, faculty report in open-ended responses, an expectation for a consistent message from the leadership that assessment is important and that the results will be used to improve student learning. If the leadership changes slow and stability is apparent, maybe this message can be communicated to faculty in a more convincing manner.

Key Conclusions
While faculty and administrators are still reviewing this report in order to make program recommendations, there appears to be some relevant themes to inform their recommendations and decisions. A list of those key conclusions follows.

1) *Faculty and administrators need to address the promotion and tenure concerns.* While this finding seemed to be inconclusive, a conversation around the role that promotion and tenure policies can play in faculty's ability to engage in meaningful assessment, to determine the value that assessment has at this university, and to determine whether the process is "worth" the investment of time and energy is apparent. If including assessment as research into the promotion and tenure process can help answer many faculty's concerns around

these issues, than it may be worth exploring further. If these concerns can be addressed through another venue, than the university should pursue that venue.

2) ***Funds/resources need to be re-allocated to support the process and the improvements within each department.***
Any research requires resources to implement it and more is required to implement findings based on research. In addition, if faculty do not know how to engage in a particular type of research, then they need to be educated about that type of research. While some of the training and implementation of the research of student learning (e.g., assessment) can be managed with very little new funding, time to engage in assessment must at least be re-allocated from current responsibilities.

Each department will need to discuss at length how it can manage the reallocation of all resources, particularly that of time in order to improve student learning. In addition, each department must discern the prioritization of improvements that are needed in order to implement the findings or recommended improvements from the assessment research.

3) ***Faculty learnings from the process need to be better communicated to all involved.***
The findings from this survey illustrate an apparent lack of communication of assessment findings to the public as well as within each department. While this may be easily remedied, the reasons for the lack of communication should be explored further.

4) ***The purpose of the process needs to be better communicated to all involved.***
Similar to point number three, some faculty's resistance to engaging in assessment may be due to their misunderstanding of its purpose. Rather than being a process for process sake or a process that is just implemented to satisfy regional re-accreditors, assessment's many purposes, particularly that of improving student learning, should be better communicated to the faculty. It may also prove beneficial to provide more public examples of how assessment has improved student learning.

5) ***Trust between administration and faculty needs to be built/improved.***
It seems that the recommendations previously posed may be present due to a lack of communication between faculty and administration or it may be that the deficient communication stems from a lack of trust of the faculty towards the administration. While consistent decisions made over time may be the only way to reduce this lack of trust, administrators should explore ways to build trust. It may be that more consistent messages of what is expected from assessment practice and how findings will be used could be communicated to faculty. Then these messages can be reinforced over time, through consistent administrative action.

6) ***The "formalized" process needs to be revisited to see where efficiencies can be improved***.
Many faculty believe that while the systematic process of assessment has value, its formalization may come at a higher cost than that of its value. Some of these same faculty argue that the cost of the systematic implementation of assessment is not worth the improved student learning gains. In other words, they believe the improvements would have been made without the research being done. Thus, the investigation of this allegation requires further exploration. However, the investigation itself may come at a cost, if done too early in the assessment process.

The improvement of student learning (in both faculty and students) is "not a product that rolls off of a manufacturer's belt. Rather, it is a complex process that requires time and expertise to first understand and then to improve." (Sydnes, 2004) To conduct a standard cost/benefit analysis of assessment too soon in a university's learning curve, especially at an institution that has not been historically committed to undergraduate learning, may be detrimental to establishing the long term gains of reflective, purposeful, and meaning implementation of a systematic process to improve student learning. The researcher, therefore, cautions the university with undertaking this type of analysis before the faculty themselves can demonstrate that they have implemented the process as a part of their day-to-day teaching and research practices.

Questions to Explore Further
While these findings may be helpful in moving North Carolina State University forward in its systematic assessment process, the data certainly provide an opportunity for reflection upon some additional questions.
1) In making assessment a systematic process by where faculty are required to document their learning about student learning, do we remove the opportunity for many faculty to participate, since documentation is so time consuming?
2) In creating a shared conceptual framework and a common language, do we provide a structure that some faculty resist simply because now there is structure where it didn't exist before?
3) How much value do universities place on undergraduate student learning? Is the expressed value worth the expected time for faculty to place in evaluating student learning? Or do the university values reside elsewhere and then therefore so must the facultys' time?
4) Can the research of student learning truly be recognized as research in all academic disciplines? And if so, could it then be supported to the same extent that their disciplinary research is?

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