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## **Assessment at North Carolina State University: Adapting to Change in the Workplace**

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### **Abstract**

Effectively introducing change in job responsibilities, particularly when dealing with tenured faculty, can be challenging. More often, additions or changes to work tasks, such as integrating assessment procedures into existing work tasks, requires employees to apply new and/or more complex knowledge, skill, and ability. When compared to organizations practicing contemporary-type work methods, institutions practicing traditional-type work methods, such as those common to traditional university settings, can find adaptation to change particularly onerous. For example, tenured faculty may perceive introductions of new concepts or new terminology as substantive changes in their practice, even though the change is an introduction of new labels to their current practice or a systematization of a former practice. Consequently, the integration of new assessment procedures, as in this instance, can have a significant impact on faculty when learning to accommodate that change. Therefore, understanding why long-tenured employees may be particularly resistant to change in the workplace is important when adding assessment procedures to existing work responsibilities. To better understand faculty resistance to change and to help facilitate the change process, one can apply the integration of work adaptation theory. This paper reviews concepts included in the theory of work adaptation, with a focus on work adaptation theory developed by Petrini and Hultman (1995). Petrini and Hultman cite six common beliefs that lie at the root of employee resistance to change and provide strategies for addressing such resistance. The six common beliefs include the following: (1) One's needs are currently met by the traditional methods already in place, (2) The change will make it more difficult to meet one's needs, (3) The risks involved outweigh the possible benefits, (4) There is no basis for the change – it's just another plan to get more work out of us with fewer resources, (5) The organization is mishandling the change, and (6) The change will fail and go away (Petrini & Hultman, 1995). This paper addresses issues related to employee resistance when incorporating undergraduate assessment into the culture of a Research Extensive institution. Discussed are experiences in confronting Petrini and Hultman's six beliefs when working with tenured employees as well as the application of strategies they suggest when addressing employee resistance to change. Furthermore, the six beliefs and strategies are applied as a means to clarify key findings with regard to the institution's successful implementation of changes designed to improve student learning.

### **Background**

The study institution is a state supported, research extensive, urban, and land-grant institution with an emphasis on science, engineering and technology. More than 29,000 students attend this institution, of which more than three quarters are undergraduates and almost nine of every ten are native state residents. Undergraduate assessment at this institution was initially a response to accreditation requirements and concerns for accountability from the state legislature. In its inception, assessment included a strong commitment to evidence-based decision-making with the intent to continuously improve programs. Assessment-based program review began at this institution in the early 1990's. At that time, program review was a process of reporting on the current state of a program, a "snap shot" of where the program was at some point in time.

In 1997, Vice Provosts endeavored to recreate the cumbersome program review process making it more meaningful and incorporating student learning outcomes assessment as the vehicle to creating an environment of continuous improvement associated with program review. Thus, an ad-hoc committee of faculty from across the campus was organized to establish guidelines for program review with the following set of requirements: (a) to focus the process on continuous improvement, (b) to make the process sensitive to outside accreditation, and (c) to respect program autonomy. Three years later, with guidelines set, a second faculty led ad-hoc committee, the Committee on Undergraduate Program Review (CUPR), was formed and given the charge of implementing the process.

In the spirit of maintaining program autonomy, CUPR respected and supported the notion that the faculty of a program should determine what the educational objectives and student learning outcomes should be for their program. Further, CUPR has worked to ensure that the faculty of a program should be the ones to decide which assessment methods are best able to measure the extent to which the graduates of a program meet the stated outcomes.

To begin this implementation process, CUPR first made sure every college was represented by interested, respected, and dedicated faculty. Next, they adopted a shared conceptualization (determined by the CUPR members) and a common vocabulary or set of definitions for key words associated with assessment. Finally, CUPR set out to transform the institution by changing the way faculty approached the process of evaluating undergraduate student learning and to imbed that process into the day-to-day activities of the institution. Introducing such a significant change requires that faculty work through a period of adjusting to new responsibilities and procedures. Applying the theory of work adaptation assisted the institution and its faculty with the change adjustment process.

#### *Work Adaptation Theory*

The introduction of innovative change to daily work tasks, such as adding embedded assessment procedures into faculty members' day-to-day academic responsibilities, can have a significant impact on the individuals learning to accommodate that change. Therefore, when a job changes, employees are required to adapt. The theory of work adaptation can be used to illustrate this process. Work adaptation is an outgrowth of over forty years of research by Dawis, Lofquist, and scholars in their development of a theory to explain how individuals adjust to changes in the workplace (Dawis & Lofquist, 1984; Sharf, 1997). The basic premise suggests that to maintain job satisfaction, individuals continually strive for a complementary relationship with their jobs. The level of job satisfaction is dependent upon the extent that the individual's needs, values, and interests are met in the workplace. Similarly, the employee must satisfy the knowledge, skill, and ability requirements of his or her job. As a result, a balance between

individual needs and job requirements must be found to attain and maintain job satisfaction. However, when changes are introduced into the workplace, that balance or equilibrium is disturbed (Sharf, 1997; Yeatts, Folts, & Knapp, 2000). Typically, this disturbance will provoke feelings of anxiety and resistance within the employee, which in turn can lead to a reduction in job satisfaction. The employee will then begin the arduous task of reestablishing equilibrium in an effort to regain job satisfaction.

Frequently, changes in the workplace demand more complex knowledge, skill, and ability requirements than the traditional methods they replace (Hackman, 1990; Yeatts, Folts, & Knapp, 2000;). As a result, organizations practicing traditional-type work methods, such as those common to a traditional university setting, will find adaptation to change especially challenging. Typically, in traditional work settings, work tasks are separated out; each employee performs a different task or focuses in on a specialty area, often developing expertise in that task or area over time. The nature of this environment invokes a propensity for individuals to protect intellectual and practical knowledge. Particularly for university faculty, the role of expert is highly regarded. Therefore, a global understanding of the organization and its work processes are limited because each employee closely guards his or her knowledge and skills (Yeatts, Folts, & Knapp, 2000). Further, this approach supports an employee's notion that if he or she is the only worker with the knowledge to perform a certain task then he or she will become indispensable to an employer, thus ensuring job security and/or status. Alternatively, organizations practicing contemporary-type work methods assemble teams that require every member to perform each individual task of an entire work process (Yeatts, Folts, & Knapp, 2000). This approach ensures the transfer of knowledge and skills among the participating employees and facilitates understanding and efficiency of the entire work process.

When addressing adaptation to change in a traditional university setting, one needs to consider the characteristics of those individuals in the presenting work environment. More often, university faculty and staff are long-tenured and this alone can make it more challenging for individuals to adjust to new practices and relinquish previously successful methods (Fossum, Arvey, Paradise, & Robbins, 1986). In a review of the literature, Yeatts, Folts, & Knapp (2000) cite common difficulties in long-tenured employees adjustment to change in the workplace. This includes a propensity for long-tenured employees to lag behind in knowing how to apply new tools and techniques as well as an inability to see how their work performance can be improved through the implementation of new knowledge. Generally, long-tenured employees have more invested in traditional methods and may also doubt their ability to effectively learn new procedures. In addition, an employee that believes he or she has already attained long-term job security and, thus, has demonstrated his or her ability to perform current work requirements, may be resistant to take on more demanding work tasks. Moreover, employees holding positions of seniority may view sharing hard earned knowledge and experience (often a condition of contemporary job redesign) as a threat to status, privileges, or control of their work environment. Given these characteristics, altering the knowledge, skill, and ability requirements for long-tenured employees can significantly disrupt the balance between job requirements and individual needs. Naturally, this disequilibrium provokes high levels of anxiety and resistance within the employee resulting in almost inevitable job dissatisfaction.

Resistance to learning new job processes for the long-tenured employee can be likened to the middle aged individual who has never needed to learn to swim. Hass & Keeley, (1998) provide a colorful metaphor to illustrate this: if an individual has managed quite well in life without knowing how to swim he or she may not be too enthusiastic about taking up swimming

lessons. This individual must first be persuaded that there are very good reasons for learning how to swim. In addition, the individual needs to believe that swimming is a skill he or she is able to develop (and without drowning in the process). From this person's perspective, learning how to swim may have some possible advantages but it is not seen as a life necessity. Rather, it is viewed as a threatening (the thought of drowning) and physically demanding task.

Understanding why long-tenured employees may be particularly vulnerable to change in the workplace is important when asking faculty to assist with institutional change such as assessment. The process of integrating assessment procedures into existing work tasks provides an opportunity to address more common causes of resistance in reaction to change as well as to implement appropriate methods for reducing resistance. Petrini and Hultman (1995) cite six common beliefs that lie at the root of employee resistance to change and also suggest methods for overcoming resistance:

*First Belief: One's needs are currently met by the traditional methods already in place.* In higher education, many faculty believe that the processes they employ in their day-to-day work tasks already function quite well. Accordingly, the introduction of a perceived additional task, such as conducting assessment of student learning, is considered an "add-on" to traditional responsibilities. As a result, faculty may have a propensity to believe there is no legitimate need for the change.

*Resolution:* Clearly explain why the change is essential and explain why and how the change will help faculty better meet their needs. In addition, Blank (1990) suggests helping employees examine exactly what they do in the workplace and why they do it. This presents the opportunity for individuals to identify loopholes or inefficiencies in their work tasks and opens up the possibility for them to see how they might do things differently.

*Second Belief: The change will make it more difficult to meet one's needs.* In an environment where faculty are primarily rewarded for their research and grant-writing, adding on an expectation to evaluate student learning is perceived to detract from the ability to meet the institutional expectations that exist for research. If expectations for research are not met, then faculty members may not receive the money they need to operate at their desired level. Thus, their needs are not met.

*Resolution:* Help diminish this threat to job satisfaction by evaluating whether their facts are complete and accurate. Determine whether their assumptions are founded on accurate information. In other words, is it true that engaging in assessment of student learning will detract from their research efforts or will the residual effects of change inevitably enhance research efforts?

When correcting inaccurate perceptions, provide viable information to support those corrections. Ask for, or even suggest, ways you might be able to assist in helping them (faculty) adjust to the changes. Demonstrate a willingness in a collaborative effort to help them adjust to the changes while finding ways for them to meet their needs.

*Third Belief: The risks involved outweigh the possible benefits.* Many faculty believe that the risk of the time spent on evaluating student learning is not worth the benefit of learning how to do it.

*Resolution:* Establish what grounds the faculty have to support this belief. Assess whether their facts are correct and that their interpretations of those facts provide a realistic assessment of the risks. In addition, Blank (1990) suggests supporting the rationale for future benefits with theory, research, and evidence. This is something that university faculty can easily relate to and that will help build confidence in the credibility of future changes. For example,

using supportive data from a comparable university that had implemented similar assessment techniques with favorable results, would offer tangible support for the proposed change.

*Fourth Belief: There is no basis for the change—it's just another plan to get more work out of us with fewer resources.* Understandably, many faculty are skeptical about whether assessment is “here to stay.” Higher education, as well as K-12, has been inundated with “quality assurance movements” and it has caused many to question the validity of learning about another process. This is further exhausted by the fact that some faculty believe that assessment is a way to reduce resources currently assigned to educational initiatives.

Resolution: Help employees understand the necessity for change. First, listen to their concerns or problems and be careful to address each while also explaining the consequences of continuing with the current methods. Identify ways the change will improve the university, college, or department. Be specific. For example, you may explain that having assessment data, which demonstrates the efficacy of a program, can be used to laud successes as well as to identify opportunities for improvement.

*Fifth Belief: The organization is mishandling the change.* Many faculty believe that the implementation of the assessment process or the way in which assessment is being conducted is not efficient. This judgment could be based on sound criteria or could be simply based on the appearance that doing assessment is taking too much time away from other projects that are valued more by the faculty or by the institution.

Resolution: Ask employees to identify their concerns then listen carefully. If mistakes have been made, apologize. Do not use excuses, rather accept accountability and provide the necessary information to explain what is being done to correct past mistakes and prevent future ones. Ask for their ideas in preventing future mishaps, but be honest about which suggestions are viable and provide a rationale. Give your employees a straight answer. Building employee support requires standing behind your promises and following through with your agreements. Failing to do this will heighten employee resistance.

*Sixth Belief: The change will fail and go away.* This is similar to the example given for the Fourth Belief in that many faculty have seen improvement initiatives in higher education prior to student learning outcomes assessment. At the start-up of each initiative, institutional support has been evident. Yet, as the initiative continues, institutional support lags and therefore faculty remain cautious about investing their time in anything “new” and different.

Resolution: Be firm in your conviction that the change is here to stay and state the reasons for this, however, explain that the process of that change is open to discussion and collaboration. Again, listen to concerns, determine if they are basing their beliefs on accurate and complete information, correct any inaccuracies, and provide information to support your corrections. Accept accountability for your mistakes and involve employees in brainstorming ideas for making a successful change and how you might help them better implement that change. Follow through with the final decisions for making improvements. Successful implementation of collaborative solutions will help build credibility and reduce employee resistance.

As with any major project, successful implementation is highly dependent on thorough preparation, smart planning, and logical execution (Blank, 1990). Before presenting a proposal for change, Blank recommends that you have all the facts clear, accurate, and complete. That means have every angle covered and anticipate possible challenges or doubts posed by your employees. Identify possible problems as well as the far-reaching effects of the proposed

changes then determine how they will be managed. Therefore, be prepared to discuss those details when questioned.

It is well and good to endorse effectual communication as one of the keys to implementing successful change but exactly how does one communicate with a resistant employee? Fortunately, Petrini and Hultman (1995) provide guidelines for communication with the resistant employee. The key lies in understanding the individual's state of mind. Obviously one cannot know for certain what a person is thinking but one can observe an individual's behavior and ask: What fact, belief, feeling, or value is being conveyed by what this individual is saying or doing? However, Petrini and Hultman state that the most effective method for determining the source of an individual's resistance is to ask specific yet non-threatening questions. The questions they suggest using are listed in four categories: (a) verify the facts, (b) challenge their beliefs, c) acknowledge their feelings, and (d) relate the change to their values.

When dealing with employee resistance, the keys to successful change comprise several principal factors. Kirkpatrick (1993) provides a good summary of suggestions that fall in line with the contents this article. First, he recommends that one understand those individuals that will have to adjust to the change. Second, he emphasizes the importance of clear communication: provide all the facts—what, why, who, and when—and answer all employee questions thoroughly. Third, he advocates employee involvement. Ask employees to assist, to be part of the solutions, and to help identify resources that may help them or their colleagues. In addition, we should include accountability and follow through with agreements as important factors in building credibility and trust with one's employees. It is our intention that the methods derived from the work of Blank (1990) and Petrini and Hultman (1995), described above, can be used as practical applications for helping one understand, involve, and communicate with resistant employees.

Finally, one element that must be included as part of implementing successful change is to provide effective learning opportunities for employees. Effective and accessible training and education can help restore the balance between individual needs and job requirements. Increasing appropriate skills and knowledge helps employees meet the demands of a redesigned job and, thus, can help restore job satisfaction (Yates, Folts, and Knapp, 2000). Typically, anxiety levels heighten when employees are required to learn something new. However, employee anxieties can be tempered when (a) training is offered well in advance of the scheduled changes, (b) individuals can learn at their own pace, (c) supplementary learning opportunities are provided for those who want them, and (d) a safe learning environment is ensured. A safe learning environment should be supportive, encouraging (i.e., providing feedback, rewards, and praise to reinforce learning), and non-judgmental (Yates, Folts, and Knapp, 2000). With a safe learning environment in place, employees will not be so afraid to make mistakes or to ask questions but rather feel free to explore new approaches and thus be empowered to learn for themselves. In the case of assessing undergraduate education, that equates to an empowered learner taking ownership of developing the assessment process and becoming a key driver in implementing those new processes in their specific program or department.

#### *CUPR's Implementation and Evaluation of the Transformation Process*

Using the aforementioned advice of Petrini and Hultman (1995) as well as Yates, Folts, and Knapp (2000), and Kirkpatrick (1993), CUPR began the process of implementing undergraduate student learning outcomes assessment into traditional academic program review.

The implementation process for transformation to assessment – based program review encompassed many of the criteria addressed in the theory of work adaptation. Furthermore, in order to understand the institution’s evaluation of its ability to address the transformation of the institution through assessment in accordance with work adaptation theory, the institution conducted a survey (Bresciani, 2004). The following implementation steps and subsequent survey findings are organized by the six common work adaptation beliefs identified by Petrini and Hultman (1995).

*First Belief: One’s needs are currently met by the traditional methods already in place.*

Resolution in implementation: As faculty involved were primarily motivated by the improvement of student learning, the evaluation process was re-designed to emphasize the gathering of information in order to improve student learning. Specific on-campus examples were used to illustrate how programs on the whole could benefit from the assessment of student learning. In addition, faculty were alerted to the fact that outside accreditation required a focus on student learning (SACS, 2000), and thus inclusion of student learning assessment into the revised program review process was inevitable.

To facilitate communication of the refined program review process, CUPR held informational presentations to the Provost, Deans, Department Heads, the Faculty Senate, the Council on Undergraduate Education (which establishes and maintains the general education requirements), and groups of faculty from individual colleges and departments. Notices went to the university community addressing the timetable for reviews as well as pre – review “assignments” designed to encourage programs to get started. Many people in the Division of Undergraduate Affairs (UGA) and CUPR generated an on-line “toolkit.” This “toolkit,” which included many online resources for those getting started in assessment, was publicized to the university community as an available resource.

Survey findings: In the survey that was administered to all full-time faculty in the spring of 2004 (Bresciani, 2004), faculty reported not clearly understanding why the change in the process had been made. Faculty believed that the formalized reporting of student learning (something the majority of faculty reported already doing) was not understood clearly. Where understanding was reported, it was due to the linkage to regional accreditation.

Clearly more communication is needed in order to promote the value of formalized reporting of student learning. Thus, varying frameworks for the dissemination of information and feedback have been organized and implemented. Follow-up surveys will be conducted to see if these changes in communication processes will prove effective.

*Second Belief: The change will make it more difficult to meet one’s needs.* Resolution in implementation: CUPR has worked continuously to make the process as manageable as possible. For instance, CUPR members have demonstrated with examples that grading coursework can easily and effectively be combined with course and even program outcomes assessment. Furthermore, CUPR provided additional on-line examples of ways in which assessment has helped programs improve.

The most challenging conversation has been in regards to the concern that research and grant writing will suffer as a result of engaging in outcomes assessment of student learning. CUPR has held many conversations around this topic and there has been no consensus as to whether assessment should become a part of the promotion and tenure consideration. And if consensus was reached, would the evaluation of student learning be as valued as other types of research? Conversations continue.

Survey findings: Faculty reported that the assessment of student learning takes a great deal of time, particularly the documentation of the assessment results. While they find benefits in the evaluation of student learning and can provide examples of how the process has helped improve student learning, faculty remain concerned that student learning assessment will go unrewarded and unrecognized by senior administration (Bresciani, 2004).

In order to address this concern, more conversations need to be held at the senior administrative and faculty leadership levels, especially if the needs of the faculty are defined by the expectations of the administration through the rewards of promotion and tenure. If the needs of the faculty are identified by the faculty as being those along the lines of making the process simpler, then further information is needed to get the faculty's perspectives on how the processes can further be streamlined.

*Third Belief: The risks involved outweigh the possible benefits.* Resolution in implementation: CUPR's use of teams of faculty in writing the "rules of engagement" for the assessment process has been key in making the process guidelines less threatening to faculty. Furthermore, it has been faculty feedback, which has advised the revision of the guidelines. Indeed, using examples of how assessment has helped programs improve is also a key factor in defusing fear of potential risks since the examples themselves are of success and programmatic in nature, and thus not personally threatening. Finally however, the question of whether the cost is worth the benefit is elusive at this point as start-up costs for any venture are often higher than the revenue generated. Conducting cost-analysis studies too early in the implementation process can lead to misinterpretations of both costs and benefit.

Survey findings: The majority of faculty surveyed identified value in the assessment process as it relates to the improvement of student learning (Bresciani, 2004). Many faculty remain concerned that the formalization of the process has taken too much of their time and that that time may be better spent on their research and grant activities. These concerns may be due to the actual amount of time being spent on the assessment of student learning or they may be due to the amount of time devoted to learning the assessment process.

Clearly, more information is needed to clarify the core of the concern. In addition, the benefits gained from assessing student learning (e.g., improvements made to student learning) should be better represented to the campus community so that they can readily see assessment's value.

*Fourth Belief: There is no basis for the change – it's just another plan to get more work out of us with fewer resources.* Resolution in implementation: In addition to the items mentioned above, providing resources can facilitate the process and make it clear that university administration is solidly behind the effort. Therefore, UGA provided financial support in the form of "mini-grants" to assist programs with well-thought implementation plans. Software designed to facilitate assessment efforts (e.g., TracDat) was purchased for any program that indicated they desired it. Additionally, many workshops were conducted by UGA and CUPR to educate faculty and assist them in: writing learning outcomes (Fall 2001 – present), identifying assessment methods (Spring 2002 – present), how to use TracDat (Fall 2002 – present), and how to make assessment meaningful and manageable (Fall 2002 – present).

These workshops were set so as to help faculty meet yearly requests from CUPR and the Vice Provost's office. The requests or "assignments" included asking faculty to develop and submit educational objectives and student learning outcomes in August 2001, develop and submit assessment plans including identifying assessment methods in August 2002, and collect data and submit a small report on assessment of at least one outcome in August 2003. This

process promotes faculty involvement and encourages personal investment in the new assessment procedures.

Survey findings: While the survey indicated that faculty would prefer that their department devote specific resources to this endeavor, many colleges have done so and there are several resources that are made centrally available as well. The faculty has had a mixed review as to whether these resources were meaningful to faculty, let alone desired by them (Bresciani, 2004).

When faculty are not positing their belief that the regional re-accreditor is the primary motivator for this fourth belief, they are either lamenting its creation or singing it praises in how well it has encouraged them to be more reflective in their practice. The largest concern appears to be one of a reallocation of time. In other words, the needed resource is time or a reallocation of existing duties so that meaningful reflection of what is being done is in fact occurring.

*Fifth Belief: The organization is mishandling the change.* Resolution in implementation: In this instance, mistakes were made and accountability was accepted. It is possible that some mistakes could have been avoided. In other cases, perceived mistakes were not mistakes per se, but opportunities to learn how to make the process more efficient and effective. Faculty are regularly asked to provide insight into how we might improve the process. As we move the process forward, we find additional opportunities for improvement and work with faculty to generate solutions that are faculty friendly, yet programmatically accountable and effective. The committee in control of the process continues to grow in size and through each membership growth spurt; new ideas emerge in how to make the process better.

Survey findings: As previously mentioned, the faculty's greatest concerns, as expressed in the survey, revolved around finding efficiencies in the formalized process (Bresciani, 2004). While this was a consistent concern, no specific means to make the assessment of student learning process were identified. Further exploration of explicit means of refining the assessment process must be sought, as not doing assessment is just not an option.

*Sixth Belief: The change will fail and go away.* Resolution in implementation: CUPR reiterated to faculty that outside accrediting agencies are articulating their expectation for assessment of student learning. Further, the assessment movement has been gaining momentum in all areas of institutional performance for over twenty years leading to various state governments, such as Virginia, Florida, and Texas to apply oversight on learning outcomes to public institutions. With this kind of committed governmental structure, one would assume that assessment will not disappear soon. Add these to a firm reminder from the Provost that assessment is here to stay and will be used in program planning and the conclusion is inevitable.

Now, the challenge is in communicating the value of continuing the process. Some faculty have begun to raise the question of whether the improvements in student learning gained through assessment would have been made without assessment. Having no data on this simply means that this argument can only be theoretical in nature, yet it remains a key belief. However, keeping with this belief, the point is that the time that is asked of faculty to engage in the assessment of student learning is an expressed value and concern of faculty and therefore should be addressed as such.

Survey findings: By many metrics, the response to assessment of student learning among the faculty has been strong, yet there is still a ways to go. While a high percentage of programs have been submitting required assessment documents, more work still needs to be done to improve the quality of assessment. To further facilitate communication and involvement, CUPR has reviewed each assessment plan turned in and has responded to every program as they

made submissions. CUPR also has solicited feedback from the programs on how to improve the process of implementing assessment of undergraduate education. At the same time, NCSU has developed a large group of involved faculty, and excellent resources for training as well as tools.

Many programs have developed their assessment efforts to an advanced state and CUPR accepted and analyzed the first assessment-based program review document in the 2002 – 2003 academic year. With all these successes, the question still looms: How do you know your institution has developed undergraduate assessment to the point where it is self-perpetuating? The answer will likely be related to the degree to which administrators and faculty have considered and addressed key characteristics associated with institutional transformations.

### **Conclusion**

Petrini and Hultman's (1995) six common beliefs provide a framework in which to organize and implement a meta-analysis of your assessment process. Doing so may provide the administrators and faculties with solutions to challenges that may not have been so obvious before. In addition, it helps one analyze the extent to which the assessment process has been of value to improving student learning. One case study was presented here. The authors encourage readers to attempt to adopt this model at their institutions as they move toward a culture of accountability.

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