

What Educators Learn When They Evaluate Students

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Abstract: *Many reports emphasize that the main aim of education reform has been improved student performance. Reform efforts have focused on curricula content, the professional development of educators, the development of non-traditional teaching and assessment methods and giving parents more choice in their children's educational experiences. Yet, after 20 years of reforms, it remains unclear what actually works to raise student achievement. Student achievement is measured using different types of assessments. Because they use the results of these assessments to evaluate their students, and have evaluation information available to them, educators are able to learn from the process of evaluating their students. Q methodology was used to investigate such 'process use' and to understand how educators gain lessons from the evaluation process that can contribute to the success of education initiatives. The four perspectives which emerged were shaped by student qualities, the educators' relationships with their stakeholders, the relationships among colleagues, the purpose or stakes associated with the evaluation activity, the relationships among the stakeholders in the teaching context and the assessment approach employed.*

Introduction

Reforms in the education sector have focused on a range of initiatives involving curricula content, the professional development of educators, the development of non-traditional teaching and assessment methods and giving parents more choice in their children's educational experiences. Levine (2006), among others, reminds us that the main aim of education reform has been improved student performance. Nevertheless, after 20 years of reform initiatives, it is not clear what actually works to raise student achievement (Levine, 2007). Teacher preparation programs are attracting renewed interest in order to produce high-quality teachers with the skills to raise student achievement. Further recognizing the high stakes associated with student achievement, significant attention is directed to its evaluation.

Evaluation of student achievement refers to the suite of measurements and related observations that provide information on what students learn and how they learn. Evaluation findings are used to improve classroom practice and to allocate resources. Since all educators are expected to engage in the student evaluation process, evaluation also provides information to stakeholders in educators' operating context about their competence to evaluate student performance. In the present study, educators identified the following stakeholders as important in their teaching contexts: students, peers, parents, department heads, principals, district supervisors, curriculum personnel and assessment personnel. Two respondents identified the School Board as a stakeholder while the business community and the course coordinator were identified by another respondent. According to Jones (2001), "because testing tends to drive the educational process at the expense of more important objectives" (p. 22) and educators associate their professional status with the student evaluation process, educators are aware of the expectations upon them to produce results.

Patton (1997) recognized that what evaluators (educators) can learn from evaluation activities (the evaluation of students) is much more than what they document in evaluation reports. He defined such learning as *process use*. He provided an expanded definition in the 4th edition of *Utilization-Focused Evaluation*:

Process use occurs when those involved in the evaluation learn from the evaluation process itself or make program changes based on the evaluation process rather than just the evaluation's findings. Process use then includes cognitive, attitudinal and behavior changes in individuals, and program or organizational changes resulting, either directly or indirectly, from engagement in the evaluation process and learning to think evaluatively (e.g., increased evaluation capacity, integrating evaluation into the program, goals clarification, conceptualizing the program's logic model, setting evaluation priorities, improving outcomes measurement). (Patton, 2008, p. 156)

In this definition Patton identified specific types of change which evaluators and stakeholders can use to specify the value of the evaluation process to a program or organization. These changes also provide contextual variables which can be used to identify the types of process use that emerge during an evaluation. He believed that process use can occur even when there is minimal stakeholder involvement in the design and conduct of evaluation activities. Process use can be specified in six categories, each of which is associated with positive outcomes, as presented in Table 1.

Table 1: Process Use—Positive Outcomes

| <i>Dimensions of Process Use</i> | <i>Positive Outcomes</i> |
|---|--|
| <i>Infusing evaluative thinking into organizational culture</i> | Contributes to all aspects of organizational effectiveness as evaluation becomes part of the organization's way of doing business; people speak the same language, share meanings and priorities; resistance to evaluation is reduced. |
| <i>Enhancing shared understandings within the program</i> | Gets everyone on the same page; supports alignment of resources with program priorities. |
| <i>Supporting and reinforcing the program intervention</i> | Enhances outcomes and increases program impacts; increases the net benefit of the evaluation; integrates the evaluation into the program, as when evaluative reflection is part of the program experience. |
| <i>Instrumentation effects</i> | What gets measured gets done; focuses program resources on priorities; measurement contributes to participants' learning; encourages reflection. |
| <i>Increasing participant engagement, self-determination, and sense of ownership (empowerment)</i> | Makes evaluation especially meaningful and understandable to participants; empowers; participants learn evaluation skills and critical thinking. |
| <i>Program and organizational effects; developmental evaluation</i> | Builds evaluative capacity; increases adaptability; nurtures becoming a learning organization; increases overall effectiveness in program management and use of feedback. |

Source: Patton (2007, p. 110)

In program evaluation in general, a determination of worth or value is made about an evaluand, such as a policy, program, product or the performance of one or more individuals (Owen, 2007). This determination of worth should be based on the "identification, clarification and application of defensible criteria" (Fitzpatrick, Worthen, & Sanders, 2004, p. 27). These criteria must be identified, clarified and understood by all stakeholders, because the recommendations made from evaluation reports are meant to "optimize the evaluation object in relation to its intended purpose(s) or to help stakeholders determine

whether the evaluation object is worthy of adoption, continuation, or expansion" (Fitzpatrick, Worthen, & Sanders, 2004, p. 5). Stakeholders' understandings of a program's intended goals and operations are important when determining and optimizing the value of the programs in a learning institution and making decisions about continuance and funding. The student evaluation process is necessary not only to make determinations about student competence but also to help planners identify if the program content and delivery are suitable for achieving the intended outcomes of the teaching program.

Patton (1997) suggested that decision makers may not always explicitly acknowledge the role of evaluation results in informing their decisions. Thus, when operations are changed or adapted, attribution to evaluation results may be overlooked. Forss, Rebien and Carlson (2002) concurred, stating that "people often forget where the knowledge and experience that they apply in decision making actually come from—and if past evaluation played a role, that role is likely to have been forgotten" (p. 31). These statements underscore the need for evaluators to have a system of capturing the instances of process use that occur during evaluation. In capturing process use, evaluators gain a description of what people learn about intended and unanticipated project or program outcomes. This knowledge is much broader than that of the evaluation findings.

The research reported in this article explores the premises of process use and their learning value. In considering the education (teaching) context, the success of educational initiatives should not be gauged solely on student achievement (scores). Doing so omits attention to the context in which the education and evaluation has occurred, which is information that is available to the educator and not contained in achievement measures. It is therefore important to understand the reasons educators respond as they do to evaluation reports, since this understanding may yield more information about why education reform initiatives succeed or fail.

In this study, the process use concept was applied to the evaluation process in which educators engage as they prepare students for different types of assessment. The aim was to analyze educators' perspectives of the connections between the student evaluation process and achievement.

Patton (2008) identified six aspects of the evaluator-user relationship which are determinants of the types of process use which would emerge in any evaluation context. Those determinants were transposed for the evaluation process in the educational context. When educators engage in student evaluation activities they do so as evaluators. Put differently, educators are expected to adjust their efforts

on the basis of the identified determinants. These are:

1. Relationships (educator–student, educator–educator, educator–stakeholders)
 - Control of the evaluation process (teacher-made, state-driven, stakes)
 - Scope of stakeholder involvement
 - Number of intended stakeholders
 - Variety of stakeholders (diversity, access, inclusion)
2. Timelines
3. Data collection approaches (about students and program)
4. Evaluation context (location, suitability)
5. Evaluation purpose (stakes)
6. Stakeholder–stakeholder relationships

In a review of published evaluation studies from peer-reviewed journals, Amo and Cousins (2007) identified 18 studies using criteria “based on the systematic observation of process use, including reflective accounts based on one or more case examples” (p. 8). These authors called for empirical studies of process use which showed “strong evidence of construct validity through the operationalization of process use” (p. 23). This study contributes to this call: Educators’ perceptions about the student evaluation process were examined to determine the types of process use that emerged in their operating contexts. Thus the findings of this study can provide evidence from obligatory evaluation to build the construct validity of the process use concept. Moreover, the findings of this study can help planners in the education field to be more responsive to the contextual variables that affect the performance of educators. Educators deliver curricula according to different delivery strategies in different educational initiatives, while also preparing students for assessment activities. The assessments are then used to gauge student achievement by curricula/strategy application.

Methodology and Design

A research methodology that was responsive to the shifting dominance of one or more of the identified determinants of process use in the teaching context was required. The methodology also had to provide a system of analyzing the subjectivity of participants’ unique perspectives about process use in their evaluation context. Q methodology was particularly attractive for the way in which it facilitates the exploration of the participants’ thought patterns before they make decisions and makes these patterns the center of the analysis.

One method of capturing the types of process use that emerge when evaluation activities are conducted in different evaluation contexts was developed and piloted. The activities examined were student assessment activities conducted by educators working at all levels of the education

field. These educators reflected on their experiences with the process of evaluating students. These reflections were in turn analyzed using Patton's framework to identify the different types of process use or what educators learned from their engagement in the evaluation process. The main research question was: *What types of process use emerge when educators engage in the student evaluation process?*

One method of teaching about a concept is to use examples to illuminate what is *not* characteristic of the concept as well as what is. The researcher adopted this method by developing a Q sample comprising statements that were illustrations of either the positive or the negative outcomes associated with each of the process use dimensions. This mix was important to demonstrate how each of the process use dimensions could be demonstrated by different types of stakeholder behavior. The Q sample (33 statements) was drawn from a concourse of stakeholder descriptions taken from journal articles, evaluation reports and books on evaluation use. The researcher focused on stakeholder descriptions because the types of process use can be expected to vary according to stakeholders' positions in a program, socio-cultural variables, regional variables, the sophistication of their evaluation experiences and their ideologies. As instructed by Patton's (2008) definition, the concourse included statements concerned with building evaluation capacity, integrating evaluation activities into the program model, setting evaluation priorities, clarifying or revising program goals, conceptualizing or re-conceptualizing the program's logic model, and improving the measurement of outcomes. Lastly, the sample also included statements directly related to the evaluation standards of utility, feasibility, propriety and accuracy advocated by the American Evaluation Association.* The utility standards were developed to make the evaluation processes and products more valuable to program stakeholders. The feasibility standards were developed to increase the effectiveness and efficiency of evaluation designs and projects. The propriety standards address the legal and ethical issues in evaluations. The accuracy standards were designed to increase the dependability and truthfulness of evaluation reports, and the knowledge generated to support interpretations and judgments about the quality components in programmes. The researcher understood that because of the variety of stakeholders' experiences during the evaluation process, stakeholders' comments regarding any of these standards were a critical component of the concourse.

Within this structure, Q-sample development was a lengthy and rigorous procedure. An attempt was made to be comprehensive in choosing statements to present all the ideas in the prevailing literature

* (<http://www.eval.org/EvaluationDocuments/progeval.html>)

about process use and stakeholder participation in evaluations. In this study, statements about the program referred to the teaching program and curriculum. The evaluation capacity referred to the competence of stakeholders to engage in evaluative inquiry about the teaching program, the types of assessments and the impact of the evaluation process. The purpose of the evaluation was to ascertain student achievement. The statements about the evaluation team considered the type of assessments used by educators, their relationships with stakeholders, the control they exerted in the evaluation process regarding the timeline and content of the assessments, and the efforts made to hone the assessments to the needs of the students. The statements are presented in the Appendix.

P-set diversity in Q is contextual and related to the perspective or standpoint held by the respondents about the topic or issue being considered. The participant group comprised graduates and graduate students at Kent State University and at the University of the West Indies in Trinidad and Tobago. Twenty-nine educators, seven males and 22 females, completed an online Q sort. Of these, nine females taught at the elementary level, 18 people (6 males, 12 females) taught at the secondary level, and two people (1 male, 1 female) taught in tertiary institutions. The majors represented in this group were Elementary Education, English, Mathematics, Science, Social Studies, Computer Science and Sport. One male and one female had attained doctorates in curriculum and instruction and in education administration, respectively. Fifteen of the educators were pursuing Master's degrees while five were pursuing doctoral degrees.

Data collection occurred during the months of July and August and it was very challenging to recruit participants during this vacation period. Although this was a convenience sample, it was felt that there was an adequate representation of university-trained educators from the elementary (9), secondary (18) and tertiary levels (2). Following the online Q sort, in a one-page questionnaire, the participants provided data about their educational attainment, present role in the education field, the stakeholders in their operating contexts and the student evaluation approaches they had employed. These educators also provided written explanations for the statements they rated 4 and -4. The factor interpretations were discussed by email and telephone with participants. These telephone discussions were not recorded but copious notes made during the discussions were used to support the factor interpretations. During those post-sorting conversations participants described their relationships with stakeholders.

All members of this P set had in the past developed assessments for students as well as prepared them for state-level tests. Some had prepared students for entrance examinations to educational institutions

other than their own. Using *student success* as a gauge, all of these educators had received feedback formally and informally about their perceived competence. These educators did not think that it was fair to use student success alone as the main criterion by which to rate their competence as educators and many cited parental support as a critical element of student success.

PQMethod 2.11 software (Schmolck, 2002) was used, with principal components analysis (PCA) followed by varimax rotation, a choice based on the exploratory nature of this study. Interpretations of factors proceeded by identifying the content of perspectives as expressed in defining statements.

Results

Four distinct perspectives about the student evaluation process emerged for these educators. In general terms, it appears that educators who loaded on each of the four factors had distinctive influences as follows:

Factor 1: the purposes and types of the student assessments and the operating context;

Factor 2: the operating context;

Factor 3: the relationship between the evaluator (the educator) and the stakeholders; and

Factor 4: the types of evaluation activities and the operating context had equal impact.

Factor 1: Continuous Learners

The first group of educators learned that they had to consider the evaluation purpose, the evaluation context and the data collection approach equally as they planned and implemented evaluation activities. These educators were influenced by their relationships with each of the stakeholders (students, parents, faculty, administration, School Board, district personnel, business community) but not by the relationships among those stakeholders. Process use as *program and organizational development* was evident as these educators used the evaluation process to learn about the areas in the program and in their own delivery which needed to be improved (statement 9, rating 4). As one educator said:

I am always looking for areas in the content that I am weak at explaining or presenting or testing the students on. By evaluating lab reports, quizzes, tests, in-class discussions, and questionnaires I can learn what is or not working for the knowledge that is being gained or missed by my students.

Process use as *instrumentation effects and reactivity* was evident because these educators used multiple forms of assessment (data collection) to get relevant data about the impact of their teaching

program (15, 3). Further, these educators worked to ensure that there would not be negative consequences for their students because of their performance on different types of assessments (16, -3). Process use as *supporting and reinforcing the program intervention* was evident because these educators learned how their delivery of the program impacted on their students' performance in the program (23, 3 and 8, 2). This group of educators recognized that the evaluation activities were a necessary component of the teaching program (10, -3). In support of this viewpoint one educator wrote:

We have to monitor how our students are doing with the material that is being taught and we must adjust to better meet their academic needs. If students are grasping the material then we, as educators, can further expand about knowledge acquired.

Process use as *infusing evaluative thinking into the organizational culture* was evident because these educators accepted the evaluation process as a part of the teaching program design and planning, and they valued accurate reports (22, 2). Process use as *enhancing shared understandings* was evident as these educators used appropriate tools to match the needs of their students (17, -4 and 19, 2). Factor 1 educators did not learn only about their teaching programs and the impact on students but also about their own competence.

Factor 2: Conformists

The second group of educators learned most from the internal stakeholders in their work context. Explained differently, they learned to operate within the organization's priorities which were the institution's image and preparing students for the "test." This perspective was defined by two unintended consequences of the evaluation process, the marginalization of students (17, 3) and the interruption of the teaching program by the evaluation activities (10, 3). Thus, based on the Patton framework, Factor 2 educators did not derive the benefit of process use as *enhanced shared understandings* during the evaluation process. This was further evidenced by the lack of consideration for the legal and ethical rights of students (4, -3), the absence of collaboration among staff in planning and developing the evaluations (32, -3) and the lack of consideration of the students' cultural background (33, -4). Despite the presence of these negative outcomes, process use as *program and organizational development* was evident because these educators recognized that by collecting evidence about the evaluation process they could have a positive impact on the teaching program (30, 4). Two distinguishing statements helped further to interpret Factor 2. Process use as *instrumentation effects and reactivity* was observed because the administrative staff and teaching colleagues were using the evaluation tools as a framework when

planning educational activities (28, 1). Also process use as *infusing evaluative thinking into the organizational culture* was evident for this group as they were able to gain the trust of their colleagues and the administration (7, 1).

In the post-sorting interviews educators discussed either the winning formula of “doing just enough” or the dissatisfaction they felt about working at institutions where the administrative focus was more on the externally driven timelines than on helping students derive the most benefit from the teaching programs. Participant comments on this gap included:

We need to have more active participation from parents and educators from other subject areas to be effective. . . . Need to look at the overall performance, see the students as a whole and not subject components. . . . Understanding more collaboration among educators, buy-in from all stakeholders, if you want a holistic view of the child.

Those educators who were willing to base their lesson off those evaluations which they have developed are those which reach the students best. They are able to individualize programs and meet the personal needs of each child. This is the kind of positive impact needed on teaching today.

For educators in this setting, collaboration efforts were geared towards helping staff members “follow the protocol.” Some of these educators felt that they were part of a conspiracy and that the trust among the staff was paramount to maintaining the status quo.

Factor 3: Navigators

The third group of educators learned most from the priorities of the stakeholders in their work context, although there was little collaboration among those stakeholders. The latter point was evident from the three statements at the negative end of the composite Q sort which were all concerned with process use as *enhancing shared understandings* among the internal stakeholders. Factor 3 educators did not perceive their colleagues to be designing their own student evaluations on their own (31, -4), or through collaboration (32, -3). The educators also indicated that they themselves had not collaborated with any of the internal stakeholders (1, -3) regarding the design of evaluations. By their choices for the positive end of the composite Q sort, process use as *supporting and reinforcing the program intervention* and *enhancing shared understandings* was evident as these educators followed external guidelines to address the needs of the diverse population of students by giving consideration to the legal and ethical issues (4, 4), as well as the cultural norms (33, 3) during the evaluation process. The external guidelines were also explicit enough for stakeholders to understand the kind of information which had to

be collected to describe the progress students were making towards achieving their academic goals (25, 3) (*enhanced shared understandings and infusing evaluative thinking*).

Six distinguishing statements aided the interpretation of this third factor. Factor 3 educators gave a positive and distinguishing rating of 2 to statements 16, 11 and 10. That rating indicated that these educators experienced two negative consequences of the evaluation process. Even though the stakeholders could understand the results (11), students felt that they would suffer negative consequences for their performances (16) and these educators felt that in having to respond to the stakeholders' priorities, the evaluation activities interrupted the flow of the program (10). The distinguishing statements 24, 3, and 26 were given a negative rating of -2 by these educators who perceived that the evaluation results were not used to guide students' future actions (24), the stakeholders were not using multiple sources to ascertain the impact of the teaching programs (26) and as educators they had not made any valuable contacts which would be useful for future collaborations (3). One educator described her work environment with these words:

With the emphasis on data collection and pacing, you know the students need remediation but you do not have the time to effectively do so. You as the teacher in the classroom cannot change the administration's pacing design so your hands are tied. So the evidence is not used effectively.

These educators worked in an environment in which they were continually traversing the changing tide in the sea of priorities.

Factor 4: Collaborators

The fourth group of educators was impacted equally by the evaluation context and the data collection approach (type of assessment). Process use was evident as *enhanced shared understandings* because stakeholders cooperated with these educators to design the evaluations (5, 4). Because of that input, this group of educators paid attention to legal and ethical issues (4, 2) and cultural norms (33, 2). Process use as *supporting and reinforcing the program intervention* was evident because these educators understood that the evaluation activities could be used to demonstrate the impact of their performance on their students (23, 2). Process use as *infusing evaluative thinking into the organizational culture* was evident because stakeholders understood the kind of data that had to be collected and perceived these educators as capable of completing the task (15, 2). Process use as *instrumentation effects and reactivity* was evident because the administrative and teaching faculty were using the evaluation tools as a framework for planning educational activities (28, 3). These educators also used multiple forms of assessment to get data about their teaching program (15, 2).

Despite the efforts made by Factor 4 educators to collaborate and be inclusive in regard to their stakeholders, they had challenges with the educator–student relationship. They perceived the students as non-cooperative (18, -3 and 14, -2), not understanding what was required of them during the evaluation process (13, -4). These educators did not agree that the timeline for the student evaluation process was made clear to them (the educators; 12, -3) but they also felt that the students did not believe that they would suffer negative consequences for sub-standard efforts (16, -2). In the post-sorting discussions these educators perceived the students' indifference to be testing fatigue. One educator explained:

I feel that my students often feel over-tested. Not only do my students feel this way but their parents definitely feel the pressures of the standardized test. This continuous measure and assessment process can bring, and often does bring, testing fatigue.

However, this group of educators valued collaboration in their work environment.

Conclusion

Evaluations are now essential in program planning and development. Stakeholders must be able to understand and utilize the information that evaluators present. According to Stump, Eggleton, Roach, and Roebuck (2006), the education field needs to identify what the expectations are for educators and students as they are stated in the intended curriculum and to understand that the expectations for students in the implemented curriculum may be different. According to Boaler (2002), for reform efforts to succeed we need to understand teacher practices and the learning which informs their practices.

In an attempt to help educators present more than just anecdotes of process use (what they learned) in their oral and written reports about the student evaluation process, this Q-methodology study was designed to help educators describe their experiences with the process of evaluating students. To aid in the analysis of participants' responses, a framework was developed to look at the impact of the contextual variables of evaluation purpose, evaluator-stakeholder relationships, stakeholder-stakeholder relationships, the evaluation context and the data collection approach on the types of process use which emerge during the evaluation process. The results indicated that evaluation contexts can produce four types of educators.

Continuous learners use the evaluation results to make determinations about their own delivery, students' competence and the effectiveness of the teaching program. They understand the purpose of the evaluation process and while they have working relationships with

all of the stakeholders, they have some amount of autonomy over the student evaluation process. They would be inclined to use multiple forms of assessment as they understand that addressing and monitoring the students' needs will be key considerations in describing the impact of the teaching program. They accept evaluation activities as part of their program.

Conformists work in environments where the feedback from the department head, principal and colleagues is more important than what the results of the assessments indicate about student achievement. These educators perceive themselves as having no autonomy regarding the use of the results and the development of assessment tools. They are not always aware of the purpose of evaluation activities but they complete their assigned tasks and consider the evaluation process to be intrusive to the teaching program. Collaboration with their peers is deliberate to ensure that they are doing what is expected of them even when they are aware of how students could be marginalized by the evaluation process. These educators understand that the effectiveness of teaching programs is also a measure of organizational effectiveness and they do not want to be blamed for any negative perception of the organization.

Navigators learn to "bob and weave" through the ocean of competing stakeholder priorities because of the heavy involvement and strong influence of stakeholders in their operating context. They recognize the importance of the evaluation process but they also understand that they need to respond to diverse needs. Their work environments are highly political, they operate under strict external guidelines which ensure inclusion but they perceive the evaluation activities to be intrusive. They feel no autonomy over the evaluation process as they do not collaborate to design and plan evaluation activities. The evaluation requirements are thought to be well understood by all stakeholders, but these educators know that stakeholders do not use multiple sources to get an objective view of their teaching programs. So these educators adapt continuously in response to dominant stakeholder influences.

Collaborators choose to form relationships with internal and external stakeholders because it helps to clarify the purpose of evaluation activities and stakeholders' priorities and expectations. These educators will utilize the evaluation tools in planning the teaching program activities. While the relationship between stakeholders may be a factor in terms of competing priorities, this group remains focused on the purpose of the evaluation activities. This group is not as successful with the educator-student relationship, as the other stakeholder relationships are given higher priority.

This study showed how some educators have traversed the student

evaluation process. What these educators learned as they participated in the process shaped the quality of the efforts they made to facilitate student achievement. The power of the methodology used to understand what educators learned lies in its democratizing and inclusive capacity, in that the opinions of all the educators were employed to interpret their collective perspectives. The findings of this study reinforce claims that planners should place greater importance on understanding the contexts in which educators work when education reform initiatives are developed and implemented. Evaluating the success of education initiatives by focusing on scores and student achievement, in contrast, only serves to devalue the breadth of the work which educators undertake as they attempt to deliver various curricula in varied settings. The perspectives illuminated in this study can sensitize the decision makers and key stakeholders to some underlying issues regarding evaluation activities in their institutions of learning which will have an impact on student achievement. Education researchers can learn from the types of process use which emerged among the educators and begin systematically to determine “what actually works” (Levine, 2007) to raise student achievement from the persons who actually interact with the students.

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References

- Amo, C., & Cousins, J. (2007). Going through the process: An examination of the operationalization of process use in empirical research on evaluation. *New Directions for Evaluation*, 116, 5–25.
- Boaler, J. (2002). Learning from teaching: Exploring the relationship between reform curriculum and equity. *Journal for Research in Mathematics Education*, 33(4), 239–258.
- Fitzpatrick, J., Worthen, B. L., & Sanders, B. R. (2004). *Program evaluation: Alternative approaches and practical guidelines* (3rd ed.). New York: Longman.
- Forss, K., Rebien, C., & Carlson, J. (2002). Process use of evaluations: Types of use that precede lessons learned and feedback. *Evaluation*, 8(1), 29–45.
- Jones, L. (2001). Assessing achievement versus high-stakes testing: A crucial contrast. *Educational Assessment*, 7(1), 21–28.
- Levine, A. (2006). *Educating school teachers*. The Education Schools Project. Princeton: New Jersey, USA. Available at http://www.edschools.org/pdf/Educating_TeachersReport.pdf.

- Levine, A. (2007). *Educating researchers*. The Education Schools Project. Princeton: New Jersey, USA. Available at http://www.Edschools.org/EducatingResearchers/educating_researchers.pdf.
- Owen, J. (2007). *Program evaluation: Forms and approaches* (3rd ed.). New York: The Guilford Press.
- Patton, M. (1997). *Utilization-focused evaluation: The new century text* (3rd ed.). Thousand Oaks, CA: Sage.
- Patton, M. (2007). Process use as a usefulness. *New Directions in Evaluation*, 116, 99–112.
- Patton, M. (2008). *Utilization-focused evaluation* (4th ed.). Thousand Oaks, CA: Sage.
- Schmolck, P. (2002). PQMethod with DOSBox Version 2.11, <http://www.lrz-muenchen.de/schmolck/qmethod/downpqdos.htm>.
- Stump, S., Eggleton, P., Roach, M., & Roebuck, K. (2006). The impact of a non-high stakes statewide test on teachers' expectations for student performance. *Proceedings of the 2006 Annual Meeting of the Psychology of Mathematics & Education of North America*.

Appendix: Types of Process Use and the Determinants of Process Use for Each Statement Used in the Q Sort

| Statement | Factors | | | |
|--|---------|---|----|----|
| | 1 | 2 | 3 | 4 |
| <i>A. Types of process use (Patton)</i> | | | | |
| <i>B. Determinants of process use</i> | | | | |
| 1. When designing my evaluations I sought input from at least one of the following: students, teaching colleagues, school administration, curriculum personnel. | | | | |
| <i>A. Enhancing shared understandings—gets everyone on the same page</i> | 1 | 2 | -3 | 3 |
| <i>B. Evaluator/stakeholder relationship—number of stakeholders involved</i> | | | | |
| 2. It was clear what stakeholders wanted from my teaching program. | | | | |
| <i>A. Enhancing shared understandings—giving voice to different perspectives</i> | -1 | 0 | -1 | -1 |
| <i>B. Evaluator/stakeholder relationship—number of stakeholders involved, variety of stakeholders involved</i> | | | | |
| 3. In the process of evaluating students I made valuable contacts which will be useful for other collaboration efforts. | | | | |
| <i>A. Enhancing shared understandings—giving voice to different perspectives</i> | -2 | 0 | -2 | 1 |
| <i>B. Stakeholder relationships</i> | | | | |

| Statement <i>A. Types of process use (Patton)</i> <i>B. Determinants of process use</i> | Factors | | | |
|--|---------|----|----|---|
| | 1 | 2 | 3 | 4 |
| 4. The legal and ethical rights of the students were considered in the evaluation process. | | | | |
| <i>A. Supporting and reinforcing the program intervention—enhances outcomes, and program impact</i> | 0 | -3 | 4 | 2 |
| <i>B. Evaluator/ stakeholder relationship—variety of stakeholders involved</i> | | | | |
| 5. Stakeholders cooperated to develop the design of the student evaluation. | | | | |
| <i>A. Enhancing shared understandings—agreeing on outcomes and determining evaluation priorities</i> | -2 | -1 | -1 | 4 |
| <i>B. Evaluator/ stakeholder relationship—control of evaluation, scope of stakeholders involved; Data collection approach</i> | | | | |
| 6. I am perceived by stakeholders as capable of assessing students in a fair manner. | | | | |
| <i>A. Infusing evaluative thinking into the evaluation culture—building support for evaluation throughout the organization</i> | 2 | 2 | 2 | 1 |
| <i>B. Evaluator/ stakeholder relationship—control of evaluation</i> | | | | |
| 7. I gained the trust of students, colleagues and the administration because of the student evaluations I conducted. | | | | |
| <i>A. Infusing evaluative thinking into the evaluation culture—building support for evaluation throughout the organization</i> | 1 | 1 | -1 | 0 |
| <i>B. Evaluator/ stakeholder relationship—control of evaluation, scope of stakeholders involvement</i> | | | | |
| 8. The student evaluation process helped me to achieve my teaching goals. | | | | |
| <i>A. Supporting and reinforcing the program intervention—building evaluation into program delivery processes</i> | 2 | 1 | -1 | 0 |
| <i>B. Evaluation purpose; Evaluation context; Data collection approach</i> | | | | |
| 9. The student evaluation process helped me to identify the subject content areas for the students and/ or curricula that needed to be revised or improved. | | | | |
| <i>A. Program and organizational development—making the organization the unit of analysis to enhance program effectiveness</i> | 4 | 1 | 0 | 0 |
| <i>B. Evaluation purpose; Evaluation context</i> | | | | |

| Statement <i>A. Types of process use (Patton)</i> <i>B. Determinants of process use</i> | Factors | | | |
|--|---------|----|---|----|
| | 1 | 2 | 3 | 4 |
| 10. The student evaluation activities interrupted the flow of the teaching program. | | | | |
| <i>A. Supporting and reinforcing the program intervention—building evaluation into program delivery processes</i> | -3 | 3 | 2 | 1 |
| <i>B. Evaluation purpose; Evaluation context; Data collection approach</i> | | | | |
| 11. All stakeholders could understand the results of the student evaluation. | | | | |
| <i>A. Increasing engagement, self-determination and ownership—evaluation more meaningful for participants</i> | -1 | -2 | 2 | 0 |
| <i>B. Evaluator/ stakeholder relationship—variety of stakeholders involved</i> | | | | |
| 12. The timeline for the student evaluations was made clear. | | | | |
| <i>A. Infusing evaluative thinking into organizational culture—linking evaluation to planning cycle</i> | 1 | -2 | 1 | -3 |
| <i>B. Evaluator/ stakeholder relationship—timeline of evaluation</i> | | | | |
| 13. Students and other stakeholders understood the kind of information I needed to acquire for the student evaluations. | | | | |
| <i>A. Enhancing shared understandings—supports alignment of resources with program priorities</i> | 0 | -1 | 0 | -4 |
| <i>B. Data collection approach</i> | | | | |
| 14. Students cooperated with me to complete the evaluation process. | | | | |
| <i>A. Increasing engagement, self-determination and ownership— participatory and collaborative evaluation</i> | 1 | 1 | 1 | -2 |
| <i>B. Evaluator/ stakeholder relationship—scope of stakeholder involvement; Data collection approach</i> | | | | |
| 15. I used multiple forms of assessment to gather relevant data about the impact of my teaching program. | | | | |
| <i>A. Instrumentation effects and reactivity—using data collection process to enhance organizational communications</i> | 3 | -2 | 1 | 2 |
| <i>B. Data collection approach</i> | | | | |

| Statement <i>A. Types of process use (Patton)</i> <i>B. Determinants of process use</i> | Factors | | | |
|--|---------|----|----|----|
| | 1 | 2 | 3 | 4 |
| 16. Students felt that they would suffer negative consequences based on their performance during evaluation activities. | | | | |
| <i>A. Instrumentation effects and reactivity—data collection processes affect program participants and staff intentionally or unintentionally</i> | -3 | -2 | 2 | -2 |
| <i>B. Evaluator/ stakeholder relationship—scope of stakeholder involvement; Data collection approach; Evaluation context</i> | | | | |
| 17. Students were marginalized after the student evaluations. | | | | |
| <i>A. Enhancing shared understandings—valuing diverse experiences</i> | -4 | 3 | 1 | -1 |
| <i>B. Stakeholder relationships; Evaluation context</i> | | | | |
| 18. Students cooperated with me to achieve the goals of the student evaluations. | | | | |
| <i>A. Increasing engagement, self-determination and ownership— participatory and collaborative evaluation</i> | 2 | -1 | -1 | -3 |
| <i>B. Evaluator/ stakeholder relationship—scope of stakeholder involvement; Stakeholder relationship; Evaluation context; Data collection approach</i> | | | | |
| 19. I used appropriate tools for the student evaluation. | | | | |
| <i>A. Enhancing shared experiences—valuing diverse experiences</i> | 0 | 0 | 0 | 0 |
| <i>B. Data collection approach; Evaluator/ stakeholder relationship—variety of stakeholders involved</i> | | | | |
| 20. There was bias in the collection of student data and presentation of the evaluation findings. | | | | |
| <i>A. Instrumentation effects and reactivity—Participants affected by evaluation tests, surveys and interviews</i> | -2 | 0 | 0 | -1 |
| <i>B. Data collection approach</i> | | | | |
| 21. Stakeholder confidence in my competence as an educator has improved because of the student evaluations. | | | | |
| <i>A. Program and organizational development— evaluability assessment, logic models used for design/ redesign of program</i> | 1 | 0 | 0 | 0 |
| <i>B. Stakeholder relationship; Evaluation context</i> | | | | |

| Statement | Factors | | | |
|--|---------|----|----|----|
| | 1 | 2 | 3 | 4 |
| 12. I took steps to insure the accuracy of my reports. | | | | |
| <i>A. Types of process use (Patton)</i> | | | | |
| <i>B. Determinants of process use</i> | | | | |
| <i>A. Infusing evaluative thinking into the organizational culture—incorporating evaluative questioning into routine decision making</i> | 2 | 1 | 0 | -1 |
| <i>B. Data collection approach; Evaluation purpose</i> | | | | |
| 23. The student evaluations showed how my teaching impacts on my students. | | | | |
| <i>A. Supporting and reinforcing program intervention—specifying and monitoring outcomes as integral to working with program participants</i> | 3 | 2 | 1 | 2 |
| <i>B. Evaluation purpose; Evaluation context</i> | | | | |
| 24. Since the student evaluations the administration, teaching colleagues and students have been using the results to guide their students. | | | | |
| <i>A. Infusing evaluative thinking into the organizational culture—incorporating evaluative questioning into routine decision making</i> | 0 | -1 | -1 | 0 |
| <i>B. Evaluation context</i> | | | | |
| 25. Stakeholders have a better understanding about the information they must collect to describe the progress students are making towards achieving their academic goals. | | | | |
| <i>A. Enhanced shared understandings; Infusing evaluative thinking</i> | -1 | 0 | 3 | 1 |
| <i>B. Evaluation purpose; Evaluation context; Data collection approach</i> | | | | |
| 26. Stakeholders are using a variety of sources to get information about the impact of the teaching program. | | | | |
| <i>A. Increasing engagement, self-determination, and ownership—learning evaluation by doing it</i> | -1 | -1 | -2 | -2 |
| <i>B. Data collection approach; Evaluation context; Stakeholder relationships</i> | | | | |
| 27. Stakeholders accept that the student evaluation process must be part of the teaching program design and planning. | | | | |
| <i>A. Infusing evaluative thinking into the organizational culture—becoming an authentic learning organization</i> | 1 | 2 | 1 | -1 |
| <i>B. Evaluation context</i> | | | | |

| Statement | Factors | | | |
|--|---------|----|----|----|
| | 1 | 2 | 3 | 4 |
| <p><i>A. Types of process use (Patton)</i> <i>B. Determinants of process use</i></p> | | | | |
| 28. The administration and teaching staff are using tools from the student evaluation as a framework when planning educational activities. | | | | |
| <i>A. Instrumentation effects and reactivity—what gets measured gets done so resources and staff efforts are aligned with performance measures and evaluation priorities</i> | 0 | 1 | -2 | 3 |
| <i>B. Data collection approach; Evaluation context; Evaluation purpose</i> | | | | |
| 29. Commitment to the teaching program has increased because of the student evaluations. | | | | |
| <i>A. Increasing engagement, self-determination, and ownership—empowerment evaluation, reflective practice</i> | -1 | 0 | -2 | 1 |
| <i>B. Evaluation context</i> | | | | |
| 30. Educators who collect evidence about student evaluation activities are having the greatest impact on the teaching program. | | | | |
| <i>A. Program and organizational development—looking at the connections between program effectiveness and organizational effectiveness</i> | 0 | 4 | 0 | -1 |
| <i>B. Evaluation context; Data collection approach</i> | | | | |
| 31. Educators are designing their own student evaluations. | | | | |
| <i>A. Increasing engagement, self-determination, and ownership—reflective practice, self-evaluation, building evaluation capacity</i> | 0 | -1 | -1 | -2 |
| <i>B. Data collection approach</i> | | | | |
| 32. In my school or college we are collaborating more to plan and develop student evaluation activities. | | | | |
| <i>A. Enhancing shared understandings—managing the program’s plan of work around evaluation issues and explicit outcomes</i> | -1 | -3 | -3 | 1 |
| <i>B. Stakeholder relationships</i> | | | | |
| 33. Cultural norms were considered when I planned the student evaluations. | | | | |
| <i>A. Enhancing shared understandings—giving voice to different perspectives and valuing diverse experiences</i> | -2 | -1 | 3 | 2 |
| <i>B. Evaluator/ stakeholder relationship—variety of stakeholders involved</i> | | | | |