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Factors to Consider Before Choosing an Assessment Instrument

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“...when a unit is charged with assessing their program for the first time, the response may be, ‘We’ll do a survey.’ While it is not difficult to understand why someone might have this response, there are at least two problems with this approach. One concern is that this response implies that surveys are ‘easy.’ ...Second, there is no consideration of what the unit needs to know about their students when the choice to conduct a survey was made. Administering a survey instrument becomes the assessment process rather than a step in the assessment process.” (Bresciani, Zelna, & Anderson, 2004, pg. 25

One of the most important considerations in the development of an assessment plan is the decision about an assessment instrument to measure a desired outcome. As the above quote indicates, it is tempting to consider which instrument is easiest to implement prior to considering the factors involved in the assessment plan (Wosley & Kneer, 2005). This, too, is commensurate with my work as a doctoral intern in the Office of Student Affairs Assessment (OSAA). One of my responsibilities is to do assessment consultation with student affairs practitioners. My experience has been that individuals come to an initial consultation meeting with an instrument already in mind before considering the factors that influence which instrument is appropriate for their assessment. For example, practitioners often want to create an online questionnaire for their assessment instrument before there has been any discussion of their mission or purpose for doing an assessment. With the proliferation and accessibility of web survey programs, it is easy to understand why one might assume that an online questionnaire is a kind of “be-all-end-all” assessment instrument.

The intent of this article is to help those new to assessment practice to understand first, the factors that inform what type of instrument should be utilized, and second, how to determine whether it is better to create an instrument or utilize a commercially designed instrument. An assessment instrument, as defined within this article, is any technique utilized to measure assessment outcomes. Focus groups, questionnaires, interviews, and rubrics are a few examples

of the many types of assessment instruments which have been developed specifically for measuring student outcomes. Careful consideration of several factors is paramount before you decide upon an existing instrument or create one to achieve the purpose of your assessment. (Table 1 provides a list of further resources on specific assessment instruments relevant to student affairs practice.)

Factors to Consider

Several factors should be considered before choosing an assessment instrument, including the purpose of the assessment, type of assessment outcomes, methodology, resource availability, and audience expectations (Bresciani, Zelna, & Anderson, 2004; Palomba & Banta, 1999; Schuh & Upcraft, 2001). It is important to consider each factor sequentially. This article contends that beginning with the purpose of the assessment naturally leads to what type of assessment outcome should be measured, and the type of methodology (qualitative, quantitative, or multiple methods) best suited for addressing the outcome. Finally, resources and audience expectations should be taken into account as one prepares to choose a specific assessment instrument.

Purpose

Professional literature recommends that before proceeding with any kind of assessment plan, one should ask, “Why am I doing this?” (Bauer & Hanson, 2001; Bresciani, 2001; Palomba & Banta, 1999; Schuh & Upcraft, 2001). By examining the purpose of the assessment plan, Barham & Scott (2006) challenge practitioners to review their unit’s or division’s mission and strategic goals before deciding on outcomes and assessment instruments. In their assessment model, Barham & Scott suggest that when you begin with the purpose, naturally you should be “aligning” the design of your assessment with the mission and goals of your work. This

reflective process acts as a compass guiding the subsequent steps leading to the most relevant and effective instrument needed to collect and measure your data.

Types of Student Assessment Outcomes

After the purpose of the assessment has been established and the mission and goals have been reviewed, student outcomes to be assessed will likely fall into one of three areas reflective of student affairs work: (1) student service, (2) student development, or (3) student learning (Barham & Scott, 2006). These three types of student outcomes have been identified as important assessment outcomes in historical and contemporary student affairs publications (Barham & Scott, 2006). Student service outcomes often address satisfaction, needs, and quality of programs and are important assessment measurements for improving customer service, program effectiveness, and student satisfaction. Student service outcomes can involve the use of tracking the characteristic of student users (Palomba & Banta, 1999) or asking for student opinions (Upcraft & Schuh, 1996). Student services are an important component of campus life as students depend upon access to information and services to meet their needs and to increase their likelihood of success. Assessing student service outcomes can assist student affairs practitioners in understanding how to assist students in their progression through college.

Student development outcomes involve measuring multiple kinds of student growth. These outcomes place importance on beliefs, attitudes, and values, including ethical and moral development, and psychosocial and identity development. In short, development outcomes measure the impact of a program or intervention on students' affective dimensions as they experience the physical, social, and learning structures inherent in a higher education setting (Evans, Forney, & Guido-DiBrito, 1998). Development outcomes often measure the experiences students have with co-curricular programs designed by student affairs practitioners.

Learning outcomes focus primarily on knowledge and skill measurements. Bloom's Taxonomy (1956) is often used as a tool to develop learning outcomes focusing on students' abilities to analyze, comprehend, synthesize, evaluate, and critically judge knowledge. Learning outcomes center on cognitive abilities such as thinking skills, rather than attitudes and values (Bresciani, 2001).

Because there are inherent differences between service, development, and learning outcomes, different types of assessment methods and instruments need to be used in order to best measure their effectiveness. For example, if a service outcome has been identified as important to measure, then quantitative methods that collect large amounts of data assessing student needs, use, or satisfaction would typically be considered. If a development outcome has been created, then measurement will focus on a group of students who have experienced a specific program. In this case, a focus group, which is a qualitative instrument, might best measure the desired affective impact specified in the outcome. Conversely, assessing a learning outcome sometimes requires the use of a quantitative pre- and post-test instrument that measures increases in skill or knowledge as a result of a specific curricular or co-curricular experience. In short, knowing the type of student outcome to assess in advance will lead to identifying the type of data you need to measure, making it easier to select an assessment method and assessment instrument (Council for the Advancement of Standards in Higher Education, 2006).

Methodology

Once the type of student outcome has been decided, it is time to consider which method is appropriate for your assessment. Assessment methods are most commonly associated with quantitative, qualitative, or multiple methods (Palomba & Banta, 1999). In order to know which methodology is the better fit for your assessment outcome, it is important to have an

understanding of each method's purpose and the advantages and disadvantages of each (Bogdan & Biklen, 2003; Schuh & Upcraft, 2001).

Quantitative methods emphasize numerical data collection using carefully constructed statistical procedures, which give statistical reliability and validity to findings (Palomba & Banta, 1999). Surveys, questionnaires, and standardized pre- and post-test instruments exemplify quantitative methods and offer the ability to assess large groups of students, while controlling for variances through random sampling. Quantitative methods allow for findings that can possibly be generalized to broader student populations (Schuh & Upcraft, 2001); thus, benchmarking, a quantitative method, is frequently utilized by higher education institutions to assess their effectiveness compared with comparable institutions. Though quantitative methods can allow practitioners to collect and statistically assess large amounts of data and may produce statistical significance(s), the question of how an outcome has practical significance sometimes requires qualitative inquiry. Furthermore, depending on the purpose and the type of assessment outcome, you may need to collect descriptively rich data from students that quantitative methods are incapable of obtaining.

Qualitative methods for assessment focus more on understanding both the meaning individuals have constructed about their world and their experiences in a particular context and point in time (Merriam, 2002). The purpose of qualitative methodology is to gain an in-depth understanding, collected through methods like interviews, focus groups, observations, or analysis of written material (Bogdan & Biklen, 2003). Qualitative assessment is not concerned with generalizing findings beyond the original inquiry; its purpose is to generate rich, descriptive details and meaning from a small group of participants (Merriam). Subsequently, qualitative

methods may be problematic for constituents who value generalizing data or making comparisons with other institutions.

Quantitative methods do an excellent job of identifying problems, providing precise numeric analysis of problems, and keeping track of large amounts of data, while qualitative methods inductively examine greater details of student learning and development that may be beyond the scope of quantitative measurements. The advantages and disadvantages of both quantitative and qualitative methods seem to mirror one another, which is why the use of multiple methods may be an advantageous for assessment practice. Multiple methods, or mixed methods, make use of both qualitative and quantitative methods to extract a more comprehensive understanding (Creswell, 2003). When practitioners use a multiple methods approach, they may use a qualitative approach to supplement a quantitative survey to get further meaning, or the data collected in a small focus group analysis leads to questions that can be addressed with a larger sample through a questionnaire. Using multiple methods is challenging because it requires an understanding of how the two methods work separately and together. However, if thoughtfully and methodically considered, multiple methods may enhance the strengths of both approaches in assessment (Maki, 2002). As with all factors mentioned thus far, choosing an appropriate method for assessment depends on the purpose of your assessment, the type of outcome to be measured, and what kind of data you anticipate the outcome will yield.

Resources

Resources to be considered before choosing an assessment instrument are far more complex than simply budget considerations. Multiple resources should be considered before deciding on an instrument, including the assessment skills of the investigator, the level of department or unit support, and the amount of time available for the assessment project (Palomba

& Banta, 1999; Bresciani, Zelna, & Anderson, 2004; Schuh & Upcraft, 2001). Below is a list of questions that should be asked during the assessment planning process when considering the level of resources and support you will have as the primary investigator.

- **Skills:** As the investigator, what is your experience with statistical analysis or coding data? If you are completely new to assessment or have minimal research skills, do you have connections to researchers who can assist you in the process of choosing appropriate instruments as well as evaluating the data collected? What is your technical ability in using statistical analysis software or survey software?
- **Departmental Support:** Does your department have individuals who can assist you in the data collection and analysis? What technical and technology support is available to you in your department? Do you have an assessment office that can support your efforts?
- **Time:** How much time do you have to collect, analyze, and evaluate the data? What time of the year are you planning on doing the assessment? What other demands are on your time?

Assessment Audience

There are many audiences involved in an assessment project. The student target group you will assess, internal constituents (the department, division, and institution for which you work), as well as external audiences (board of regents, trustees, state elected officials, parents, national standards) all have a “voice” in what is important to assess and how to assess it. In choosing an assessment instrument, there are some questions that need to be answered concerning your target population: How often do you have access to students? What will get your students involved in an assessment project? Your accessibility to students will influence

the type of method and instrument you will use (Bresciani, Zelna, & Anderson, 2004). For example, if you have minimal access to students, using a qualitative instrument may require greater access and time with students than is available.

Understanding what is important to your department, or to whomever has requested the assessment, will directly influence the type of assessment you design and the instrument you choose. Bauer and Hanson (2001) share an example of the differences between audience types and different measurements: “[k]nowing, for example, that the assessment is requested by the student activities office for program improvement demands different methods and measures than if you were assessing your institution’s general education curriculum” (p. 3).

Knowing who will see the data, which is often your department as well as external constituents, is an important consideration. Some audiences “respond better to empirical data, while others are more interested in rich data that results from interviews or focus groups” (Bresciani, et al., 2004, p. 27). Furthermore, if the proposed outcome to be assessed is student learning or development, some members of your audience may be interested in direct evidence of student skills or knowledge, requiring instruments such as rubrics, portfolios, or pre-post test instruments. On the other hand, indirect evidence of student development or learning that uses measurements that ask students to reflect on their learning or development (e.g., interviews, journal reflections, focus groups) may be acceptable as well (Maki, 2002; Palomba & Banta, 1999). It is important, if possible, to identify the key audience members who will review the final report and to consider what kind of assessment data they value.

CDI or LDI?

After considering the previous factors, you should have a grounded idea of what kind of method (quantitative, qualitative or multiple methods) and type of instrument will best yield and measure your assessment outcome. The final crossroad to consider is whether or not you should utilize a commercially designed instrument (CDI) or create your own locally designed instrument (LDI). This decision is critical to the “the quality of the study, its credibility and ultimately the impact of the study on the problem, policy, or practice” (Schuh & Upcraft, 2001, p. 73). The intent of this section is to identify the advantages and disadvantages of both types of instrument in order to equip you to consider whether you should utilize a local or commercially developed assessment instrument.

Commercially designed instruments are readily available for use through several clearinghouses (See Table I) and carry with them the advantage of having already been tested for reliability and validity. Reliability refers to an instrument’s ability to be counted on to produce consistent responses over time, while validity is concerned with the instrument actually measuring what it is intended to measure (Palomba & Banta, 1999). Many institutions trust the reliability and validity of a commercially designed instrument for “face credibility” and its ability to benchmark, or provide norms (data from comparable institutions) (Schuh & Upcraft, 2001). However, CDI’s are incapable of addressing institutional differences such as student populations, organizational structures, or educational values (Palomba & Banta), though several commercial instruments do allow for a limited number of local questions to be added to assuage this disadvantage (Schuh & Upcraft). CDI’s can also be expensive, and data analysis can take several months to complete, which, in turn, may render the data no longer relevant to current situations (Palomba & Banta).

A locally designed instrument (LDI) can be institutionally focused and matched closely with intended assessment outcomes, giving it the advantage of being flexible and meaningful to an individual institution (Palomba & Banta, 1999). However, there can be an inherent bias that should be considered when the design, administration, and assessment of an instrument are completed by the same group of individuals (Palomba & Banta). With the assistance of those experienced in understanding reliability and validity, LDI's can be well constructed and psychometrically sound; however, the time to design, pilot, and evaluate the design can take several months or longer.

If there is still confusion about whether to use a commercial or local instrument, Ory (1994) suggested several logistical considerations, which this article has adapted into questions that may assist in making a decision: (1) Which one is readily available and can be adapted to the needs and purposes of your assessment? (2) Which one best fits your skills and surrounding resources? (3) Which one best fits your budget parameters? (4) Which instrument offers a more favorable response or participation rate?

After a thorough consideration of the advantages and disadvantages, it should be clear whether a commercially or locally designed instrument is best suited for your assessment plan. The bottom line in choosing between a commercially or locally designed instrument may come down to what your institution values most (Schuh & Upcraft, 2001).

Creating Your Own Instrument

If all factors unique to your assessment situation lead to creating a local instrument, there are steps to consider in your design. It is beyond the scope of this article to consider all the components in the different types of quantitative or qualitative instruments; therefore, as a

practical example, this article will focus on the most important steps of one design: a qualitative focus group.

Creating a Focus Group

A focus group is an interview style designed for a small group of usually no more than 10-12 individuals, formed by an investigator and led in a discussion; in this case, the discussion is assessing a particular student outcome (Berg, 2007). Palomba & Banta (1999) affirmed the assessment potential of this approach, noting that “focus groups provide an excellent opportunity to listen to the voices of students, explore issues in depth, and obtain insights that might not occur without the discussion they provide” (p. 196-197). The following steps have been identified by the author of this article as important in designing a focus group:

Step One: Create the assessment questions.

- Make sure questions address the intentions of the assessment outcome and purpose. If, for example, the focus group is measuring how well students demonstrate their knowledge of low risk choices in alcohol use, make sure the questions ask students to give examples of how they know they have made their choices.
- Keep it simple and manageable. Although there is no predetermined number of questions for focus groups, consider asking only as many questions as needed to measure the intended outcome. Focus groups generate a considerable amount of data that then has to be transcribed and coded for themes, so create questions that are pertinent and manageable.
- Arrange questions in a structured interview framework. Having a predetermined list of interview questions will better ensure that the moderator stays on task and that the data

collected is accurate and directly connected to intended assessment outcomes (Bresciani, Zelna, & Anderson, 2004).

Step Two: Choose a purposeful or stratified sample for the focus group.

- There are several types of sampling strategies for qualitative assessment (Berg, 2007); however, a purposeful sampling may increase the chances that the group recruited includes individuals the investigator knows can provide the data needed to measure the outcome (Bogden & Bilken, 2003).
- Stratified sampling is another sampling strategy that is effective for assessing an outcome. This method involves recruiting individuals representative of the population demographics being assessed (Berg, 2007). For example, if the assessment is examining a student development outcome involving student leaders on campus, recruiting a sample of student leaders from several student organizations would be appropriate.

Step Three: Pilot the assessment questions.

- Practice your questions with others. This practice will help clarify questions, arrange for order and flow, and help you better understand whether the proposed questions actually generate data that address your assessment outcome(s), thus improving the validity and reliability of your questions.

Step Four: Practice.

- Focus groups require the ability to manage different viewpoints and small group dynamics. If you have never moderated a focus group, recruit a small group with whom to pilot the experience who can provide critical feedback. In qualitative research, the investigator is the research instrument (Merriam, 2002) so make sure that you are fully prepared before conducting the actual focus group.

There are other logistical considerations in the design, as well as decisions about collecting the data, analysis, and evaluation of qualitative data, but for the scope of this article, the above steps are a good starting place for designing a qualitative assessment instrument. For more information and resources on focus groups, consider reading the chapter, “Focus Group Interviewing” in *Qualitative Research Methods for Social Sciences* (Berg, 2007).

Final Thoughts

Choosing or creating an assessment instrument is one of the most important decisions of the assessment process (Schuh & Upcraft, 2001). Assessment does not work well if you have to work backward because steps were missed along the way. In many respects, choosing an assessment instrument is an inductive process emerging from several factors that must be considered in the early development of your assessment plan.

Table 1- Assessment Instrument Resources for Student Affairs Practitioners

Resource	Reference & Description
Commission on Assessment for Student Development (ACPA)	http://www.myacpa.org/comm/assessment/# *Lists of assessment instruments for student development outcomes
Buros Institute of Mental Measurements	http://buros.unl.edu/buros/jsp/results.jsp *Clearinghouse for commercially designed instruments with description of instrument purpose and contents.
North Carolina State University Internet Resources for Higher Education Outcome Assessments	http://www2.acs.ncsu.edu/UPA/assmt/resource.htm *Compilation of assessment instruments and site addresses.
FALDO's	Council for the Advancement of Standards in Higher Education. (2006). <i>Frameworks for assessing learning and development outcomes</i> . *New resource identifies 16 types of student learning and development outcomes and related commercially designed assessment instruments.
"Review of Selected Assessment Instruments"	Schuh, J. H., & Upcraft, L. M. (2001). <i>Assessment practice in student affairs: An applications manual</i> . *Annotated resource for assessment instrument specifically geared towards student affairs practice.

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