EVALUATING SERVICE-LEARNING PROGRAMS
IN
DENTAL EDUCATION

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A. Overview

During the past decade, there has been an increased focus on community-based education in dental professional schools, mirroring a fundamental shift seen throughout health professional schools to better prepare their students to ultimately work in "real world" settings (Bailit, 1999; Henshaw, unpublished results). The incorporation of these activities exposes dental professional students to a wider variety of patients, procedures and settings that they may not experience within their own institution (Bailit, 1999; Henshaw, 1999).

Service-learning is an educational strategy that takes community-based education to a higher level.   There is a vast body of research that has shown that service learning enhances students' academic performance, civic engagement, as well as personal, social and professional development (Astin & Sax, 1998; Driscoll et al, 1996; Eyler & Giles, 1999). These domains are now reflected in the Accreditation Standards for Dental Education Programs from the Commission on Dental Accreditation. For example, there are competencies related to providing patient-centered care, managing diverse patient populations, successfully functioning in a multicultural work environment and serving as a leader of an oral health care team (Commission on Dental Education, 1998).   Service-learning can be a valuable tool that will assist dental and dental hygiene students to gain competency in these areas.

In addition, service learning provides tangible benefits to the faculty, community, and university-community relationships (Driscoll et al, 1996; Astin & Sax, 1998).

Even though service learning activities have been shown to be an effective teaching methodology, it is important to evaluate service learning programs within your institution so that one can demonstrate their benefit to your institution, determine how to make programmatic improvements and recognize partnerships and individuals who have excelled in this area.

B. Fundamentals of Service Learning

Service Learning is an educational methodology that is relatively new to health professional education; still, it has been successfully incorporated into medical and nursing education (Seifer et al, 2000; Norbeck et al, 1998). It is a structured learning activity in which community service is combined with academic objectives and each of these components is given equal weight.   The students' learning experience combines specific learning objectives, preparation and reflection (Furco, 1996). Service learning provides a unique opportunity for dental and dental hygiene students to engage in service activities that also gives relevance to their didactic coursework by taking lessons from the classroom and applying them in a community setting and taking lessons learned from the community back to the classroom. This experience has been shown to better prepare students to be dental professionals, increase self-awareness and self-confidence and enhance students' view of dental professionals civic responsibilities (Mofidi, 2003).

Table 1: Characteristics of Service-Learning Programs

- Academic objectives are attained through service activities

- Equal emphasis on service and learning

- Community organizations and academic institutions are equal partners

- Structured reflective activities are an integral component and may include: journals, discussion groups/seminars, critical incident reports, or other activities that may occur individually or in small groups that provide students the opportunity to reflect on their service activities

- Academic credit is granted for learning

Table 2: Benefits of Service-Learning Programs

- Enhances relevancy of academic coursework and service activities

- Enhances leadership, citizenship and personal responsibility

- Empowers students as learners, teachers and critical thinkers

- Promotes innovation and creativity in faculty teaching approaches

- Enhances community-campus relationships

- Provides opportunity for faculty scholarship

- Provides service to community

Service-learning differs from traditional community-based education in several significant ways (Furco, 1996; Seifer et al, 2000):

- **Balance between service and learning**: On one end of the spectrum, traditional community-based education often has the primary focus as the education of the dental or dental hygiene student, with little emphasis or thought to the needs of the community in which the education is taking place. Volunteerism is at the other end of the spectrum where the needs of the community are paramount and there is little significance placed on students' education. Service-learning creates a balance between these two priorities so that the needs of both parties are met, ensuring a mutually beneficial partnership.

- **Integral involvement of community partners**: Rather than just serving as a site for community-based experiences, in service-learning the community partner actively engages in the planning, implementation and evaluation of the community-based experience.

- **Emphasis on reciprocal learning**: In service-learning the distinction between teacher and student is blurred.   The students bring knowledge from their academic training to the sites, often providing new insight to their community-based preceptors, while the community-based preceptors provide the students with the wealth of their vast experience working with the community.

- **Emphasis on reflection**: Reflection is an integral component of service-learning. Thus, the emphasis is not only on what occurs during the community-based rotation. There is also a structured reflective component that can take many forms including journal entries

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or discussions that help to make connections between the students' community-based

experiences and their didactic and "traditional" clinical work.

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Resources:

Journals:

The Journal of Experiential Education

Journal of Public Service and Outreach

Expanding Boundaries by the Corporation for National Service

The Michigan Journal of Community Service Learning

Useful Websites:

American Association of Higher Education (www.aahe.org)

American Association for Higher Education Service-Learning Project
(http://www.aacc.nche.edu/Content/NavigationMenu/ResourceCenter/Projects_Partnerships/
Current/HorizonsServiceLearningProject/HorizonsServiceLearningProject.htm)

The Big Dummy's Guide to Service-Learning
(http://www.fiu.edu/~time4chg/Library/bigdummy.html)

Campus Compact, (www.compact.org)

Center for Healthy Communities at Wright State University:
(http://www.med.wright.edu/chc/Education/Servicelearning.html)
Chronicle of Higher Education (need subscription to access some articles)
(http://www.chronicle.com)

The Clearing House & National Review Board for the Scholarship of Engagement
(www.scholarshipofengagement.org)

Community Campus Partnerships for Health. 3333 California Street, Suite 410, San
Francisco, CA 94118. (http://www.futurehealth.ucsf.edu/ccph)

Corporation for National and Community Service: (http://www.nationalservice.org)

EPICENTER – Effective Practices Information Center
(http://www.nationalservice.org/resources/epicenter/)

ERIC Clearing House on Higher Education (http://www.eriche.org/)

Invisible College (http://www.nsee.org/)

Learn and Serve America National Service-Learning Clearinghouse:
(http://www.servicelearning.org)

National Society for Experiential Education (http://www.nsee.org/)

Portland State University: Promotion and Tenure Guideline –
(www.oaa.pdx.edu/oaadoc/ptguide/)

The National Service-Learning Clearinghouse (http://www.nicsl.coled.umn.edu/)

Service-Learning Home Page (http://www.csf.colorado.edu/sl/)

Service Learning Internet Community (http://www.slic.calstate.edu)

UCLA Service-Learning Clearinghouse (http://www.gseis.ucla/sic/)

II. Evaluation

A. Why Evaluate?

Effective program evaluation is a structured, ongoing process that provides a more thorough understanding of the program being evaluated (W. K. Kellog Foundation Evaluation Handbook, 1998). In the case of service learning programs, it allows one to understand the impact of the program on students, faculty, community partners, the academic institution as well as how the program is influenced by internal and external factors. Evaluation also demonstrates what has been successful and determines areas where new directions or approaches may be beneficial, thus allowing for improvement.

Program funders, or accrediting bodies often dictate or require evaluation. However, since evaluation allows us to make informed decisions about program changes and often provides new insights that were not previously apparent, program evaluation is an integral component of good program planning and management that should be undertaken even if it is not demanded by external forces.   Furthermore, evaluation allows for accountability, allowing for professional and programmatic growth and provides us the opportunity to recognize outstanding student, faculty or community partners achievements. (Shinnamon, 1999) Finally, evaluation provides a means to share the successes and failures (yes, failures) of your programs with others. This communication can take many forms, for example, coverage of the program's successes in institutional or local newspapers or papers published in peer reviewed journals that can assist faculty in other institutions to develop or refine programs at their own institutions.

Table 4: Reasons to Evaluate

1. To assess the impact of the program

2. To improve program operations or increase efficiency

3. To identify if the program needs to take new directions

4. To obtain accreditation

5. To justify program continuation or resource allocation

6. To meet an imposed requirement from funder or other stakeholder

7. To obtain data that can be used for public relations

8. To fully describe the programs so it can be replicated

9. To identify faculty, students or partners that have excelled

10. To provide an opportunity for faculty scholarship

B. Evaluation Approaches

This section is designed to provide an overview of the common evaluation approaches. There is no one approach to evaluation. Instead the approach is driven by the purpose of the evaluation and the resources available.

Formative/Summative or Both:

According to Scriven (1967), evaluation can serve two very important functions: formative and summative. The purpose of formative evaluation is to provide information to the program directors throughout the implementation phase that will allow the director to make program improvements during implementation. This approach allows for problems to be quickly identified and corrected. In contrast, summative evaluation usually occurs at the conclusion of the program with the purpose of describing the overall success of the program. When conducting both types of evaluation, it can be challenging for the evaluator since the feedback from the formative evaluation actually causes the program implementation to change. It is therefore important to document all changes and when they took place so the summative evaluation plan can take these changes into account.

Process Evaluation:

Process evaluation primarily focuses on the amount and type of activities that were utilized in the program in order to understand **how** the program works. This information can then be used to improve the program, because you will have an understanding of which activities or combination of activities were vital to the program's success and which activities did not contribute or contributed adversely to the outcomes of interest. For example, process

evaluation could assess: how partners are selected, type of student preparation or training, the number of contact hours, and other information related to the way that the program was implemented. Process evaluation is particularly important when conducting multi-site programs, since in most instances the implementation will not be identical in each site. Process evaluation, by itself, is most often inadequate as the only evaluation component because it does not provide any information regarding the impact or outcome of the program. However, process evaluation can be an integral component of a comprehensive evaluation because understanding why a program achieves does or does not achieve it goals is clearly as important, if not more important, than knowing that it does reach its goals.

Possible Process Evaluation questions:

1. How are community partners selected?
2. What training do community preceptors receive?
3. How are students selected?
4. What training do students receive?
5. Do the activities mirror what was proposed?
6. Are the activities being carried out by the appropriate, trained individuals?
7. What is the nature of the interaction between students and community partners?
8. What is the nature of the interaction between the University and community partners?
9. What is the quality of the services delivered by the students or program?
10. What resources are available to the program/students?
11. Are there differences in the way the program was designed and actually delivered?
12. Is the program implemented identically in all sites
13. Is the program working equally well in all sites? Why or why not?

Usual Designs:

- Case Studies
- Focus Groups
- Direct Observation
- Interviews
- Record Review

Effectiveness Evaluation (Performance Monitoring):

Effectiveness evaluation concentrates on evaluating the program in terms of its key outcomes and is most often conducted utilizing a goal achievement model, the simplest form of goal-based evaluation, and one of the most commonly used approaches to program evaluation. In this model, the extent to which a program meets the goals and objectives set forth by the program is assessed. Although this approach can satisfy the needs of program administrators, it is really not much more than monitoring outcomes and does not provide insight into why these results have been achieved, it does not look at foreseen or unforeseen side effects, nor does it question the relevance or value of the goals to the impacted populations (Scriven, 1991). When undertaking goal-based evaluations, it is important to recognize that goals and objectives tend to be program management tools and may have little to do with program merit.

One of the potential problems with utilizing solely this approach is that it assumes that the goals have value. If one is truly interested in determining program worth, it may be necessary to delve more deeply into community, student and faculty needs as well as personnel and student performance and the program process. This shift tends to change the focus of the evaluation from a management perspective (outcome) to one that is more consumer oriented (impact). (Scriven, 1991) In addition, other evaluation components (the choice of which will be driven by the purpose of your evaluation) can be added to the evaluation and can include: a cost analysis, assessing side effects, and determining if the goals should be modified. If one wishes to utilize a goal based approach to evaluation, additions such as these will help to compensate for the inherent weaknesses in this method.

Sample Effectiveness Evaluation (Outcome Evaluation or Performance Monitoring) Questions:

1. Number of community partners
2. Number of students participating
3. Number of contact hours
4. Number of services provided.
5. Number of individuals served.
6. Will the goals be achieved?
7. Will the goals be achieved in the specified timeframe?

Usual Designs:

- Focus Groups
- Interviews
- Record/Document Review

Cost Evaluations:

This type of evaluation describes the cost of the program or program components and is useful when comparing two alternative programs, especially when determining how to allocate scarce resources.

Sample Evaluation Questions:

1. What is the cost for the student delivering program services versus the program staff delivering the same services?
2. What is the cost per educational session?

Usual Designs:

Cost Benefit: Cost-benefit studies estimates the dollar benefits for each program outcome for each dollar spent. One of the main challenges in conducting this type of evaluation is assigning a dollar value on a program outcome.

Cost Effectiveness: Cost- effectiveness evaluation focuses on the productive use of resources and the relative costs of achieving program results. For example, cost-effectiveness evaluation will assess how much effort or cost was necessary to achieve a particular outcome. The results of this type of analysis are often expressed in terms of dollar costs per program participant or per outcome.

Impact Evaluation:

Impact evaluation, one of the most sophisticated and most complicated evaluation approaches, seeks to determine the short and long term impact of the program, including unforeseen consequences.   Impact evaluation can assess: implementation, intervention and outcomes and is interested in determining causality, that is, to determine if the program (which is really an intervention) caused the intended or unforeseen outcomes.   It also focuses on determining which program components or program characteristics were responsible for the impact. One of the drawbacks is that it usually requires more sophisticated evaluation designs, for example experimental or quasi-experimental designs, which can be challenging to accomplish in educational settings.

Since programs often produce outcomes that are unforeseen, one approach to impact evaluation can be to utilize a goal-free approach. The evaluator begins the evaluation without knowing the goals of the program and through the evaluation process tries to understand what the program is actually doing. The premise behind this approach is that if

the program is achieving its goals then it will be assessed during the evaluation. Conversely, if the goals of the program are not being met, that will also be uncovered during the evaluation process and resources are not gathering information that may be irrelevant (Scriven 1991). As previously alluded to, a goal-free evaluation stresses the effect of the program on the program's target population. This avoids one of the aforementioned pitfalls associated with goal-based evaluations in that the evaluator need not be concerned with the relative worth of the program goals.

Given that the evaluator does not know what he is "supposed" to find, he is much more likely to uncover side effects of the program. This is important, especially from the perspective of the program's target population. Since service-learning has multiple target populations, identification of side effects should be an important component of evaluation. For example, if as a result of an intensive elementary school-based oral health education and treatment program, the students' oral health improves, but their standardized test scores decrease, it is important to identify this unforeseen consequence. However, to undertake this type of evaluation, an external evaluator most often must be utilized and this is often not a viable alternative because of limited resources. Furthermore, in many situations, it may be impossible to completely blind the evaluation team regarding the program's goals. For example, when evaluating service-learning, it may be obvious to the evaluation team that the program sends students to the community as part of their educational experience. However, the focus of the learning that is to take place and the potential impact on the community need not be disclosed.

C. Planning the Evaluation

Focusing the Evaluation

Who will be affected by or involved in the evaluation and who is your audience?

Garnering support of the stakeholders, those potentially affected by the outcome of the evaluation, is a critical step of the evaluation and should be completed as early as possible in the evaluation process. Clearly, not every individual affected by the evaluation will be able to be involved in the evaluation process, however, if at all possible, one should choose well-respected individuals within each stakeholder group to be active participants who can then assist in the dissemination of information throughout the evaluation. To the extent possible, in order to gain as wide a perspective as possible, factors such as race, ethnicity, gender and age should also be considered when choosing representatives from stakeholder groups.

When the team of stakeholders is assembled, they should be brought together to help define the purpose of the evaluation (see next section). Although this process can be time consuming, it can actually be one of the most crucial steps to the success of the evaluation. This process will help to ensure that the implementation of the evaluation will run more smoothly, provide multiple perspectives, more people are vested in collecting data and that the evaluation results will be more relevant and used by a broader constituency (Ewell, 1988).

Table 5: Potential Stakeholders for Service-Learning Programs	
1.	University Administration
2.	Dental or Dental Hygiene School Administrators
3.	Faculty
4.	Students
5.	Program Director/Administrators/Coordinators
6.	Alumni
7.	Administration of Community-Based Partner Organization
8.	Director or Coordinator of Community-Based Partner Organization
9.	Clients Served by Community-Based Organization
10.	Private Practicing Dentists / Dental Societies
11.	Commission on Dental Accreditation
12.	Local and State Boards of Public Health

What is the purpose of the evaluation?

As discussed previously, there are multiple reasons to conduct evaluations. It is imperative to clearly define the purpose of the evaluation to ensure that the outcome of the evaluation is successful, since it is the purpose that drives how the evaluation is structured and what is assessed. If the results of the evaluation are not consistent with goals set forth by the stakeholders, then the findings will often be rejected by those who were intended to benefit from the evaluation, rendering the outcome ineffectual.

Sometimes equally as important as defining the purpose of the evaluation, is defining what the purpose of the evaluation is NOT, especially when communicating with a diverse range of stakeholders. For example, if the evaluation is intended to find areas of potential program improvement, it may be worthwhile to explicitly state that the results will not be used to eliminate the program or to make judgments about particular students or faculty members (Thomas, 1994).

What will be evaluated?

In an ideal world when planning a program evaluation, all aspects of the program would be assessed. However, limited resources often dictate that we must prioritize what will be evaluated. External forces such as the funder's interests or concerns sometimes determine what will be evaluated. Nonetheless, the evaluation team must ultimately decide what is important to assess in the program. For example, do you need to assess the educational impact on students, determine if the program is meeting the needs of the community, identify if the service-learning program is running as efficiently as it could, assess the impact on the community-campus relationship or a combination of these?

Once you determine the areas on which the evaluation should focus, you will need to decide on the depth and breadth of the evaluation. Rarely, are there unlimited resources so this tends to be a tradeoff. In general, the greater the breadth of data collection, the less in-depth the data will be. Conversely, if the evaluation is focused in a more discrete area, then a greater level of detail can be collected on this topic.

Evaluation Questions

Developing the evaluation questions can be one of the most challenging aspects of the evaluation process (Patton, 1990).   If you choose to delve more deeply into the evaluation and try to understand what components of the program contributed to the results, then early on in the evaluation planning you will need to hypothesize which program components affect the outcomes in question. These key concepts will become the questions that will be evaluated. When determining the key concepts, it is often helpful to list out the program components:

- Goals
- Underpinnings
- Materials
- Process
- Products/Outcomes
- Personnel (Students, Faculty, Community Preceptors)

When examining the program components, one approach is to model what the different stakeholders would want to know and use this as a basis for determining the key evaluation questions.   After this exercise is complete, you will probably have more evaluation questions than can be realistically answered during the evaluation. The next step is to prioritize the evaluation questions as high, medium, or low priority and eliminate from consideration those that are not related to the purpose of the evaluation. Finally, one can identify sub-questions for each key evaluation question, which should be more specific and provide more detail.

Table 6: Question Development Worksheet

Stakeholder	Program Component	Key Questions	Subquestions	Priority
Program Director Students Community Partners	Process	1. Are the students receiving adequate preparation in order to participate in service-learning programs?	• Is the appropriate material being presented? • Is the training for the appropriate length of time/ • Is the person conducting the training following the protocol?	Medium
Community Partners	Outcomes	2. Is the community partner able to provide more services as a result of the service-learning program??	• Have the students provided quality services? • How has the supervision of students affected the amount of services offered by the staff.	High

D. Designing the Evaluation

The evaluation design provides the framework for planning and conducting the evaluation. However, it must be realistic given the resources available and be sensitive to the culture of the community or communities participating in the program.   In academic settings, especially when service-learning activities are new, there may be pressure from administration to prove the educational value and community impact of service learning activities as compared to traditional educational methods. Therefore, an experimental or quasi-experimental design may be the most appropriate approach.

Experimental Designs:

A true experimental design is best able to determine causality, or in other words, determine if the service-learning program caused the outcomes of interest, and is considered the "gold standard" of impact evaluation. Although a true experimental design is the most rigorous in its ability to determine causality, it has two very strict requirements which are often difficult to fulfill: (1) students are selected and assigned randomly to participate in the service-learning program (2) the program is carefully controlled to make sure that students in the control (comparison) group which are receiving the standard curriculum are not exposed to any aspects of the service-learning program.   However, given the constraints of an academic curriculum, it may be difficult if not impossible to randomly assign students to one of two educational designs and in certain situations may be considered unethical or unacceptable to the community.

Quasiexperimental Designs and Non-Experiemental Designs:

The quasi-experimental design differs from the true experimental design in that it does not require that students be randomly assigned to the control or comparison group. However, it does require a control and experimental group. It is advisable to maintain as many factors constant in the two groups as possible. Quasi-experimental designs are more flexible and more conducive to evaluating most service-learning programs in dental and dental hygiene schools. Alternatively, non-experimental designs can be used to examine changes in outcomes among populations of interest (faculty, community members, students etc), but do not include a control (comparison) group.

Before and After: Before and after designs can be utilized both as quasi-experimental and non-experimental designs. In a before and after design, information is gathered about the main outcomes before and after the intervention, in this case before and after the service learning activity, to assess whether any change has occurred in the outcome measures of interest. One of the difficulties encountered in conducting this type of evaluation is that it requires data to be collected before the program is implemented. If the evaluation plan was not developed prior to the program being implemented, often such data is not available. In the case of a non-experimental design, the lack of a comparison group makes it more difficult to demonstrate that it was the program that caused the outcome of interest (rather than some external force). If a well-matched comparison group is utilized, this strengthens the evidence that any changes in outcomes are indeed due to the program

itself and this would then be considered a quasi-experimental design. However, obtaining an appropriate comparison group can be challenging.

Ex-post Facto Design: In this quasi-experimental design, the control group is selected after the completion of the program. All pre and post test data are collected after the completion of the service-learning activities. In this type of design, one must be concerned that the control and experimental groups may not be comparable. In addition, this design has the inherent problems of trying to accurately collect pre test data after the completion of the program.

Interrupted Time Series Design: This design requires repeated measurement of a variable over periods of time that occur both before, during and after program implementation. This allows for the analysis of change in the outcome measure of interest over time. In this design, the same subjects serve as both your control and experimental group.

Cross Sectional Design: Unlike experimental and quasi-experimental designs, a cross sectional design measures the outcome of interest at the conclusion of the program, but has no baseline measures taken before the program began and has no control group. Without any comparison measure, there is no way to conclude that the program caused the outcome of interest. However, by estimating correlations between outcomes and differences in the implementation (process evaluation data collected such as differences in intensity of training,

more contact hours etc), it may be possible to identify plausible links between outcomes and the services delivered.

E. Collecting Information:

Once the evaluation questions have been finalized and the design chosen, the next step is to clearly identify the information that you will need to collect in order to answer your evaluation questions. For example, it is not sufficient to state that you would like to collect information on student outcomes. By this point you should have clearly defined that you want to assess the impact on student's confidence, leadership skills, and commitment to community engagement.

What kinds of information should be collected?

Once the information that you will need is clearly defined, one needs to decide where the information is housed, as well as which method or methods of data collection will provide the data most efficiently, realistically and in a form that can be evaluated most easily. Data can be collected in a variety of methods including: focus groups, individual interviews, direct observation, written surveys, or document reviews. The method used to collect the necessary information will vary depending on the purpose of the evaluation and the evaluation question. However, it is desirable to collect the same information from multiple sources and perspectives to validate the information.   In addition, if possible, it is advantageous to include both quantitative and qualitative data collection methods.

Another important point to keep in mind when determining what data to collect is that it is often better to collect more, rather than less detail when asking a question or extracting existing data from documents. The small effort it takes to record additional information or elicit more in depth responses for closed ended questions really has no disadvantage, because information can easily be collapsed into larger categories, but once the data is collected it is most often impossible to get more detailed information. For example, although it is relatively easy to utilize a 5-point Likert Scale to assess students' commitment to community service, it is also possible to ask the question with a yes/no response. The 5-point scale will provide a much richer understanding of the students' perspective and can be easily condensed to a dichotomous variable during data analysis. However, the converse is not true.

Table 7: Considerations when choosing data collection methods

- Time – How long does the assessment take to administer and analyze?

- Cost – How much does the assessment cost to copy, administer, and analyze?

- Personnel – Who will administer and analyze the assessment? Does it require special skills or training?

- Results – Does the assessment provide the necessary information in an informative format?

Quantitative Data

Most evaluation plans include the collection of quantitative data: numerical values that can be counted or measured in order to measure change. For example, the evaluation may count the number of student contact hours in their service-learning program or may measure decrease in smoking rates after a tobacco cessation program.

Common Methods of Collecting Quantitative Data:

Surveys:

Surveys by definition are a series of questions that are answered by a participant either in a written or oral format. The questions are most often closed ended, where the participants are forced to choose from a predetermined set of answers. Alternately, the questions may be open ended, allowing the participant to freely express their answer to the questions.

Document Review:

Review of existing information that is housed in medical records or administrative documents. Documents can include student transcripts or grades, national board scores, licensing examination results, timesheets and course syllabi.

Qualitative Data

Qualitative information is descriptive in nature. Although many individuals have discounted this form of evaluation, when evaluating service-learning programs it should be given equal weight to quantitative data. In fact, qualitative evaluation can actually be more beneficial than quantitative evaluation in certain instances because it can provide a context and a depth of information that is often not possible when collecting quantitative information. The information assessed by qualitative methods can provide insights that quantitative information cannot and can provide a framework that allows one to more accurately interpret the quantitative results.

Common methods of collecting qualitative data

Focus groups:

Focus groups usually bring together between 8 and 12 participants with a facilitator to discuss a specific topic, utilizing a predetermined set of open-ended questions. The dynamics of the group facilitate information coming forward that may have remained dormant in one on one interviews.

Interviews:

Structured interviews are useful in gaining information about a participant's experiences and perspectives. The process includes a trained interviewer asking a participant a prepared set of open-ended questions. In the structured interview, the interviewer is trained to stay to a specific script and strays from this script as little as possible. In contrast, as the name

implies, the purpose of an in-depth interview is to gather a substantial amount of information about specific topics. In these interviews, there is not strict adherence to a script. Instead the interviewer is encouraged to ask additional questions and probe for more information about areas of interest.

Observation:

One of the simplest ways to collect information by direct observation is to develop an observation checklist. The checklist includes a list of all the behaviors, physical characteristics or environmental characteristics of interest. Whenever the behavior or characteristic is observed, the box corresponding to that behavior is checked. Scores can be developed by counting the number of events observed (can be considered a quantitative component of observation). If the checklist is administered multiple times throughout the program, it can allow you to track changes over time or between different aspects of the program. Alternatively, the observer can record the activities and setting in a narrative form, can utilize video or audio tapes or a combination of these methods.

Critical incident report:

A critical incident report is a reflective document which requires students, faculty, administrators or community partners, to critically evaluate key events that positively or negatively impacted the service-learning program. The report should list with dates, the critical incidents chronologically as well as an explanation of why the event was "critical". By examining critical incident reports over time, it is possible to develop an overview of how programmatic issues affect outcomes.

Table 8: Advantages and Disadvantages of Data Collection Procedures

Data Collection Method	Purpose	Benefits/Advantages	Disadvantages/ Challenges
Questionnaires/ Surveys	Suitable for collecting large amounts of relatively superficial information from large numbers of individuals	- Can administer to a large number of individuals - Relatively inexpensive - Can collect large amounts of data - Fast -Easy to analyze -Good for sensitive topics	-May not get complete information - Wording can bias responses - May need assistance with sampling - Often doesn't provide a full picture
Interviews	Suitable for collecting in depth information about discrete topics from a small number of individuals	- Allows full exploration of topics, new perspectives - Allows flexibility - Can develop rapport with interviewee -Allows for clarification	- Can be difficult to analyze - Can be time consuming - Can be expensive - Interviewer can bias responses
Document Review	Suitable for extracting information from existing program documents	-Information already exists - Limits bias - Can provide historical information	- Time consuming - Information may be incomplete/ inaccurate -Not flexible -Accessing records may be difficult
Observation	Suitable for collecting information about how the program is actually being implemented	- Allows viewing of program activities as they are occurring - Provides context - Flexible - Good for identifying unforeseen outcomes	- Difficult to categorize and interpret behaviors - The observation itself can influence the behaviors of interest - Relatively expensive and time consuming
Focus Groups	Suitable for collecting in-depth information from groups on discrete topics	- Efficient way to collect a large amount of in-depth data in a short time - Group dynamics can facilitate consensus building	- Facilitator can bias results - Need good facilitator to ensure all views are voiced - Difficult to analyze - Not useful for sensitive topics
Critical Incident Report	Can augment primary data and generate new views and perspectives	-Flexible -Lots of information	-Participant driven -Limited data relevant to the evaluation embedded in large amount of information -Subject to bias

How much information should you collect?

Given the complexity and multiple stakeholders involved in service learning programs, it is

advisable to gain information from multiple sources to gain different perspectives and to

validate information that is critical to the evaluation results. This strategy of utilizing

multiple measurements can sometimes be costly and inefficient; however, the resulting

wealth of data and increased certainty in the validity of the results most often offsets the cost

in necessary resources.

Table 9: Data Collection Procedures Plan

Collection Procedure	Questions Addressed	Collection Schedule	Respondent/ Population/ Source	Sample
Observation	1. Are the students receiving adequate preparation in order to participate in service-learning programs?	Observations: March 5, 8, 12	Faculty	All training sessions
Focus Groups		Focus Groups: April 3, 16, 28	Faculty, Students, Community Partners	n =10 per group;randomly selected
Document Review	2. Is the community partner able to provide more services as a result of the service-learning program??	Review: April 21-26	Daily encounter forms	n = 30 days of encounter forms randomly selected prior and during student rotation
Survey		Survey: April 15-May 30	Community partners	n=all community partners

F. Analyzing Information

Quantitative Analysis:

Quantitative analysis can run the gamut from very simple to extremely complex. The best advice when designing the analysis plan is to consult a statistician when one is available. It is also important that the statistical plan is appropriate for the evaluation goals and the information collected, again a statistician can be of assistance in this effort.

Table 10: Basic Steps in Analysis of Quantitative Data

1. Copy original data collection forms and file the originals. This will protect the original sources of data from loss or damage.

2. Determine if data will be entered into a computer database (preferable) or hand tabulated.

3. Create variable names and coding for each data point. For example gender can be named sex or gender and males=0 and females=1

4. Decide how to handle missing data. It may be helpful to consult a statistician on this point.

5. Input data or begin hand tabulations

6. If data is inputted into a database, it is considered ideal to input the data twice and to compare the two datasets to check for data entry errors. If the information is being hand tabulated than each calculation should be done twice to check for calculation errors.

7. Check for outliers, data responses that seem improbable or unlikely.

8. Conduct the analysis as outlined in the evaluation plan.

There are two general types of statistics: descriptive and inferential. Descriptive statistics utilize numbers, averages and percentages to describe the information collected. In contrast, inferential statistics are appropriate when one wants to compare differences and similarities among groups and to determine if these results were "statistically significant", meaning that they did not occur by chance.

Descriptive Statistics:

Descriptive statistics provide a good, basic understanding of the data collected as part of your evaluation and should be the first step in conducting the data analysis. The simplest form of descriptive statistics is to look at the frequency of categorical responses. When analyzing continuous data (data that can take on any value, for example weight), the best starting point is to look at the mean (average), median (the point at which half the responses are greater and half are less), mode (most frequent response) as well as the range of values (minimum and maximum values). Another valuable piece of information that should be reported when calculating the mean is the standard deviation, a measure of variance, which tells you how much the score varies from the mean.

Inferential Statistics:

Inferential statistics provide a more thorough understanding of your quantitative results. By definition, inferential statistics analyze the mean values and standard deviations of variables in two or more groups and compare these between the groups. The most fundamental inferential statistical test is the t-test. The t-test can be used in both experimental and quasi-experimental designs and is used to compare two average scores. For example, using

inferential statistics would allow comparison of the average National Board Score of dental students who participated in service-learning to those who underwent the traditional dental education or comparing pre and post test scores of students who participated in service learning programs and a control group. One of the limitations of the t-test is that only two groups can be compared at a time. However, multiple t-tests can be calculated during the evaluation. If more than two groups need to be compared, then the analysis becomes more complicated. In this case, analysis of variance (ANOVA) is most appropriate because it will allow three or more groups to be analyzed concurrently (Wilde, 1995).

Statistical software packages, such as SAS and SPSS are available to assist with both descriptive and inferential statistical analysis. In addition, most database packages such as EXCEL also provide tools to conduct a full range of descriptive statistics and to carry out basic inferential statistics. However, a caution is necessary since although using some of these statistical packages can seem easy, it is easy to make errors when using these tools. Therefore, it is important, especially in the case of inferential statistics to have someone knowledgeable in statistical analysis review the results.

Qualitative Analysis:

Table 11:   Basic Steps in Analyzing Qualitative Information
1. Read all the information collected
2. Organize comments into categories:
a. Strengths
b. Weaknesses
c. Suggestions / Recommendations
d. Outcome Indicators
e. Outcomes
3. Label all categories
4. Identify patterns or recurring themes within categories (Preferable to have multiple readers)
5. Look for deviations in patterns and factors that may explain the deviations
6. Interpret information in terms of evaluation goals
7. Do the findings corroborate the findings from data collected from other sources and/or methods? If not, hypothesize why the discrepancies occurred.

G. Reporting Information

When reporting your results, one of the most important considerations is to take into account your audience. It is probable that few of the stakeholders will be interested in the full evaluation report, perhaps only the program director and funding agency. However, virtually all stakeholders would benefit from some portion of the evaluation results. This argues that the results should be communicated in different reports, with different formats, for different stakeholders. However, regardless of the format, the results should be conveyed in a way that is the most compelling for the audience. For example, the general public may care less about charts and graphs of the specific program results, but may prefer bullets and case reports or anecdotal stories which can be reported in their local newsletters or community newspapers.

Sample Report Contents:

1. Title Page

2. Table of Contents

3. Executive Summary

    a. Statement of the purpose of the evaluation

    b. Brief description of the service learning program

    c. Brief description of the evaluation design and implementation

    d. Highlight any limitations

    e. Major finding and recommendations

4. Purpose of Report

5. Background of University or Dental (Hygiene) School

6. Program Description

    a. Program Background

        i. Service Learning

        ii. How did the program begin

        iii. How many participants, community partners and students

        iv. Community partners

    b. Program Goals and Objectives

    c. Outcome Measures

    d. Program Activities and Resources

    e. Staffing

        i. Numbers

        ii. Roles and Responsibilities

7. Evaluation Goals

    a. Evaluation Questions

8. Evaluation Methodology

    a. Evaluation Design

        i.   Describe Design

        ii. Why was this design chosen

        iii. Limitations of this design

    b. Types of Data Collection

    c. Selection and Development of Data Collection Instruments

        i.   Well established instruments with known reliability and validity vs.
             instruments developed specifically for this evaluation, vs. adaptation
             of existing instruments for this project

    d. Data Collection

        i.   Who administered the instruments and how

        ii. Who was the data collected from

        iii. Was data collected from the entire population or were sampling
             procedures utilized

    e. How was Data Analyzed

9. Results

    a. Program Context

    b. Program implementation

c. Program outcomes

    i. Foreseen

    ii. Unforeseen

10. Conclusions

    a. Interpretations based on results of data analysis

        i. How good were the results of the program?

        ii. Did the anticipated results match actual results? If not, why?

        iii. What happened in program implementation that had the greatest impact on program outcomes?

        iv. What happened in program implementation that had the least impact on program outcomes?

        v. How certain is it that the program actually caused the outcomes?

        vi. What can be done to improve the program?

    b. Limitations of evaluation

        i. Design limitations

        ii. Data collection limitations

11. Recommendations

12. Appendices

    a. Data Collection Instruments

    b. Quantitative Data (usually in tables)

    c. Qualitative Data (usually transcripts)

    d. Bibliography

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Evaluation Glossary

The following definitions have been adapted from the BJA Evaluation Web Site (http://www.bja.evaluationwebsite.org/index.html 5/23/2003) or Evaluation Thesaurus (Scriven, 1991)

A

Accountability

Responsibility for the justification of expenditures, decisions, or the result's of one's own efforts. Program managers and teachers should be, it is often said, accountable for their salaries and expenditures and time, or accountable for pupils' achievement, or both. Accountability thus often requires some kind of cost-effectiveness evaluation where it is taken to imply more than the ability to explain how one spent the money ("fiscal accountability"), but it is also expected that one be able to justify this in terms of the achieved results. Teachers have sometimes been held wholly accountable for their students' achievement scores (19th century England), which is of course entirely inappropriate because their contribution to these scores is only one of several factors (the most frequently cited other influences are student ability, support from parents, support from peers, and support from the rest of the school environment outside the classroom). On the other hand, a teacher can appropriately be held accountable for the difference between the learning gains in his or her pupils and those of the other teachers of essentially similar pupils.

A common fallacy associated with accountability is to suppose that justice requires the formulation of precise goals and objectives if there is to be any accountability; but in fact one may be held accountable for what one does, within even the most general conception of professional work, for example, for "teaching social studies in the sixth grade", where one might be picking a fresh (unprescribed) topic every day, or every hour, in the light of one's best judgment as to what contemporary social events and the class capabilities make appropriate. Less specificity makes valid measurement more difficult, but not impossible. Captains of vessels are held accountable for their actions in wholly unforeseen circumstances. It is true, however, that any measurement process has to be carefully selected and applied if educational accountability is to be enforced in an equitable way. This does not mean that the test must be matched to what is taught (because what is taught may have been wrongly chosen), but it does mean that any test must be carefully justified, for example, (or could justifiably have been) covered, given the need and ability of the students and the general language of the curriculum. It would often be the case that a range of alternatives would have to be recognized by the testing process or that the process would look only at rather general features of what was done. (Scriven, 1991)

Activities
Services or functions carried out by a program (i.e., what the program does). FOR

EXAMPLE, treatment programs may screen clients at intake, complete placement assessments, provide counseling to clients, etc. (BJA, 2003)

After-Only Designs
One-shot studies; evaluation designs involving only measures taken after the program has been completed. (BJA, 2003)

Analysis of Covariance
A method for analyzing the differences in the means of two or more groups of cases while taking account of variation in one interval-ratio variable. (BJA, 2003)

Analysis of Variance
A method for analyzing the differences in the means of two or more groups of cases. (BJA, 2003)

Assessment

Often used as a synonym for evaluation, but sometimes the subject of valiant efforts to differentiate it. None of these efforts are worth much, either in terms of intrinsic logic or adoption. For one example, the term is sometimes recommended for restriction to processes that are focused on quantitative and/or testing approaches and less on judgment; the quantity may be money (as in assessment of real estate for tax purposes, by the county assessor), or numbers and scores (as in the National Assessment of Educational Progress). However, these appear to be mainly cases of evaluation in which the judgment is built into the context of the numerical results. Raw scores on a test of no known content or construct validity would not be assessment; it is only when the test is – for example – of basic mathematical competence that reporting the results constitutes assessment in the appropriate sense, and of course the judgment of validity is the key evaluative component in this. (Scriven, 1991)

Attitudes

The compound of cognitive and affective variables describing a person's mental set toward another person, thing, or state. It may be evaluative or simply preferential; that is, someone may think that running is good for you, or simply enjoy it, or both; enjoying it does not entail thinking it is meritorious, nor vice versa, contrary to many suggested analyses of attitudes. Attitudes are inferred from behavior, including speech behavior, and from inner states. No one, including the person whose attitudes we are trying to determine, is infallible about attitudinal conclusions, even though that person is in a *nearly* infallible position with respect to his or her own *inner states*, which are not the same as attitudes. (Scriven, 1991)

Audience (of or for an evaluation)
A special term for the **consumers** of the *evaluation*: those who will or should read or hear of the evaluation, either during or at the end of the evaluation process, including many who are and many who are not being evaluated. The audiences usually go well beyond, but include, the clients. To give an example, the audiences for an evaluation of any substantial state-funded educational program including the following: the legislature in general and especially its relevant committees, the state department of finance (and the relative principal analyst there), the governor's office, related federal agencies, private foundations with an interest in the area, parents' associations, and so on. Audiences of the *program*, where it is the kind of

thing that has audiences (such as a television program), are covered as **recipients** (immediate consumers) of it. An evaluation report needs to be carefully planned, perhaps done in several versions, to serve the several audiences that are commonly involved. (The term originates with Robert Stake, but the present definition is something of an extension of his.) (Scriven, 1991)

B

Baseline Data
Initial information on a program or program components collected prior to receipt of services or participation activities. Baseline data are often gathered through intake interviews and observations and are used later for comparing measures that determine changes in a program. (BJA, 2003)

Before-After Designs
The basic quasi-experimental design known as the before-after design involves the measurement of "outcome" indicators (e.g., knowledge, attitudes) prior to program implementation, and subsequent re-measurement after implementation. Any change in the measure is attributed to the treatment. This design provides a significant improvement over the one-shot study because it measures change in the factor(s) to be impacted. However, this design suffers from threats of history - the possibility that some alternate factor (besides the treatment) has actually caused the change. (BJA,2003)

Bias
There are two crucially distinct senses of this term, not well distinguished in dictionaries. In the evaluative sense, "bias" means much the same as "prejudice", and its antonyms are "objectivity", "fairness", "impartiality". In the descriptive sense, "bias" means much the same as "preference" (or-nearly-"commitment"), and its antonym is "disinterest" (or-nearly-neutrality"). On the whole, the core sense-certainly the sense used in educational and psychological measurement-appears to be the evaluative one, in which it refers to systematic errors or a disposition to errors of a kind that are likely to adversely affect humans. The errors are often due to a tendency to prejudge issues because of beliefs or emotions that are wrong or irrelevant.

Bias may be a feature of an experimental or evaluation design, as well as of judges and judgments; for instance, a sample of the students enrolled in a school is biased against lower economic groups if it is selected from those present on a particular day, because absenteeism rates are usually higher among lower economic groups. Hence, if we are investigating an effect that may be related to economic class, using such a sample would constitute a design bias. On the other hand, bias is not demonstrated by showing, as is common in politically driven bias checks, that minorities or women do less well on a test or in a selection process than others; or that the content of an item is less likely to be familiar to them than to a white male. Bias detection requires deeper analysis of the use to be made of item scores in the interpretation process. (Scriven, 1991)

Bias Control

A key part of evaluation design. It should be seen, not as an attempt to exclude the influence of definite views, but to limit the influence of unjustified views, e.g., premature or irrelevant views. For example, the use of (some) external evaluators is a part of good bias control, not because it will eliminate the choice of people with definite views about the type of program being evaluated, but because it tends to eliminate people who re likely to favor it for the irrelevant (and hence error-conducive) reasons of ego involvement or income preservation.

Other key aspects of bias control involve further separation of the rewards channel from the evaluation reporting/designing/hiring channel, for example by never allowing the agency monitor for a program to be the monitor for the evaluation contract on that program, never allowing a program contractor to be responsible for letting the contract to evaluate that program, and so on. The ultimate bias of contracted evaluations resides in the fact that the agencies that fund programs fund most or all of their evaluations and hence want favorable ones, a fact that evaluation contractors are (usually extremely) aware of, and that does a great deal to explain the vast preponderance of favorable evaluations in a world of rather poor programs.

For more details, see "Evaluation Bias and Its Control", in *Evaluation Studies Review Annual,* Vol. 1, G. Glass, ed., (Sage, 1976). The possibility of neat solutions to bias-control design problems is kept alive in the face of the above adversities by remembering the Pie Slicing Principle: "You slice and I'll select". (Scriven, 1991)

C

Case
A single person, thing, or event for which attributes have been or will be observed. FOR EXAMPLE, a case would be one student if the sample to be studied were 250 high school students. (BJA, 2003)

Case Study
A method for learning about a complex instance, based on a comprehensive understanding of that instance, obtained by extensive description and analysis of the instance, taken as a whole and in its context.

Categorical Measure
A measure that places data into a limited numbers of groups or categories. FOR EXAMPLE, Current Marital Status - Married, Never Married, Divorced, Widowed. (BJA,2003)

Causal Association
A relationship between two variables in which a change in one brings about a change in the other. FOR EXAMPLE, caffeine intake and sleeplessness are causally related if greater amounts of caffeine ingested result in a longer times taken to fall asleep. (BJA,2003)

Causal Relationship
The relationship of cause and effect. The cause is the act or event that produces the effect. The cause is necessary to produce the effect. FOR EXAMPLE, increasing the number of police on patrol causes crime to decrease. (BJA, 2003)

Closed Question
A question with more than one possible answer from which one or more answers must be selected. FOR EXAMPLE, the following is a closed question:
Sex: (1) Male (2) Female.
The following is not a closed question:
What is your political affiliation? _____. (BJA, 2003)

Closed-Ended Questions
A question that limits responses to predetermined categories. FOR EXAMPLE, multiple choice and yes/no questions. (BJA,2003)

Clustering
Identifying similar characteristics and grouping cases with similar characteristics together. (BJA, 2003)

Codebook
A document which lists the variables in a dataset, possible values for each variable, and the definitions of codes that have been assigned to these values. (BJA, 2003)

Coding
The process of converting information obtained on a subject or unit into coded values (typically numeric) for the purpose of data storage, management, and analysis. FOR EXAMPLE, the sex of the respondent may be coded "1" for a female and "2" for a male. (BJA, 2003)

Comparative Change Design
The quasi-experimental design known as the comparative change design allows for the measurement of change in relevant outcome factors (using a pre- and post-test) and provides for comparison of this change between a treatment group and a non-random comparison group. Because comparison and treatment groups are not randomly selected, alternate explanations due to prior differences between groups continue to be a threat. (BJA, 2003)

Comparative Post-test Design
The elementary quasi-experimental design known as the comparative post-test design involves the measurement of outcomes for both the treatment group as well as a comparison group. However, unlike more sophisticated designs, selection of participants into the treatment and comparison groups is not done randomly. While such a design to some extent overcomes the issues of a one-shot study by allowing comparisons of success, this design is typically plagued by threats due to selection bias. That is, an alternate explanation for differences between group outcomes is that some alternate factor, which was related to the

selection process, has actually caused the differences in outcomes. (BJA, 2003)

Comparative Time-Series Design
The quasi-experimental design known as the comparative time series tracks some outcome of interest for periods before and after program implementation for both the treatment group as well as a non-randomly selected comparison group. Because comparison and treatment groups are not randomly selected, alternate explanations due to prior differences between groups continue to be a threat. (BJA, 2003)

Comparison Group
A group of individuals whose characteristics are similar to those of a program's participants. These individuals may not receive any services, or they may receive a different set of services, activities, or products; in no instance do they receive the same services as those being evaluated. As part of the evaluation process, the experimental group (those receiving program services) and the comparison group are assessed to determine which types of services, activities, or products provided by the program produced the expected changes. (BJA, 2003)

Composite Measure
A measure constructed using several alternate measures of the same phenomenon. FOR EXAMPLE, a measure of class standing may be constructed using grade point average, standardized test scores, and teacher rankings. (BJA, 2003)

Confidence Interval
An estimate of a population parameter that consists of a range of values bounded by statistics called upper and lower confidence limits, within which the value of the parameter is expected to be located. (BJA, 2003)

Confidence Level
The level of certainty to which an estimate can be trusted. The degree of certainty is expressed as the chance that a true value will be included within a specified range, called a confidence interval. (BJA, 2003)

Confidence Limits
Two statistics that form the upper and lower bounds of a confidence interval. (BJA, 2003)

Confidentiality
Secrecy. In research this involves not revealing the identity of research subjects, or factors which may lead to the identification of individual research subjects. (BJA, 2003)

Confounding
An inability to distinguish the separate impacts of two or more individual variables on a single outcome. FOR EXAMPLE, there has over time been an inability to adequately distinguish the separate impacts of genetics and environmental factors on IQ. (BJA, 2003)

Continuous Variable
A quantitative variable with an infinite number of attributes. FOR EXAMPLE, distance or length. (BJA, 2003)

Control Group
A group of individuals whose characteristics are similar to those of the program participants but who do not receive the program services, products, or activities being evaluated. Participants are randomly assigned to either the experimental group (those receiving program services) or the control group. A control group is used to assess the effect of program activities on participants who are receiving the services, products, or activities being evaluated. The same information is collected for people in the control group and those in the experimental group. (BJA, 2003)

Control Variable
A variable that is held constant or whose impact is removed in order to analyze the relationship between other variables without interference, or within subgroups of the control variable. FOR EXAMPLE, if the relationship between age and frequency of delinquent activity is first investigated for male students, then separately investigated for female students, then sex has been used as a control variable. (BJA, 2003)

Convenience Sample
A sample for which cases are selected only on the basis of feasibility or ease of data collection. This type of sample is rarely useful in evaluation and is usually hazardous. (BJA, 2003)

Correlation
A synonym for association or the relationship between variables. (BJA, 2003)

Correlation coefficient
A numerical value that identifies the strength of relationship between variables. (BJA, 2003)

Cost-Benefit
A criterion for comparing programs and alternatives when benefits can be valued in dollars. Cost-benefit is the ratio of dollar value of benefit divided by cost. It allows comparison between programs and alternative methods. (BJA, 2003)

Cost-Benefit Analysis
An analysis that compares present values of all benefits less those of related costs when benefits can be valued in dollars the same way as costs. A cost-benefit analysis is performed in order to select the alternative that maximizes the benefits of a program. (BJA, 2003)

Cost-Effectiveness
A criterion for comparing alternatives when benefits or outputs cannot be valued in dollars. This relates costs of programs to performance by measuring outcomes in nonmonetary form. It is useful in comparing methods of attaining an explicit objective on the basis of least cost or greatest effectiveness for a given level of cost. FOR EXAMPLE, a treatment program may

be more cost-effective than an alternative program if it produces a lower rate of dental caries for the same or lower costs, or the same rate of dental caries for a lower cost. (BJA, 2003)

Covariation
The degree to which two measures vary together. (BJA, 2003)

Critical Competitors

Viable alternatives to the evaluand that may produce comparably valuable benefits and comparable or lesser cost. They must be considered in almost all evaluations because it is almost always important to find out whether the *best* use of the resources involved is being made, as opposed to the pragmatically less interesting question of whether it's just being thrown away (efficiency rather than effectiveness, in one evaluative parlance). Critical competitors: (i) may not be the same kind of object as the evaluand – critical competitors for a team of trainers include a computer with CBT package, and text; (ii) may have to be created especially for the exercise; (iii) may cost about the same or substantially more or less (depending on how important money and the prospective benefits are to the needs of the client or consumer); (iv) may not have been though of before the evaluation began; and (v) rarely include the no-treatment alternative, thus distinguishing the normal approach in evaluation from that in experimental design for research purposes. They are only more or less functionally equivalent to the evaluand; each may offer significant particular advantages in order to be competitive. Look particularly for critical competitors that are only on the horizon now, but are sure to arrive during the time period when the evaluand would be in place.

Critical competitors that should figure in the evaluation of a $20 text might therefore include: another at $20 that is reputed to be much better, one that is just as good (or better) for $10 (or $5), or even one that is much better for $25. One should also include a film (if there is one), lectures, TV, a job or internship, and so on, where they or an assemblage of them cover similar learning. The *absence* of a text – the "no treatment" alternative – is rarely an option. The usual choices are the *old* treatment, *another innovative one, both,* or a *hybrid* – or something no one so far has seen as relevant (or perhaps not even put together). Thinking up or finding these unrecognized or "created" critical competitors is often the most valuable contribution an evaluator makes to an entire evaluation and coming up with them requires creativity, local knowledge, and skepticism combined with realism. In economics, concepts such as cost are often defined in terms of (what amounts to be the) critical competitors, but it is often assumed that identifying them is easy.

Identifying critical competitors often requires reference to the client and context, but one has to remember to use the term carefully. One might think that the "critical competitor" in evaluating our local high school basketball team is the perennial league leader from another school, which the locals have never beaten. In formative evaluation, this is likely to be an inappropriate choice if the leader comes from a much larger school with much greater support from wealthier alumni. The coach and principal at our school – for that matter, the community – can't afford that alternative. For this community, one critical competitor is the same team with a different coach; for the present coach, critical competitors include a different style or player selection procedure. Summatively, one must distinguish *actual*

competitors or *socially defined* competitors from critical competitors (the appropriate comparisons); and, relatedly, distinguish *ideals* from *appropriate standards*. The other team in this example performs at a higher level, a level that might even qualify as an *ideal* for the local school, but it's just a play on the word "competitor" to identify them as a critical competitor. "Aiming high' as in this example, is, strictly speaking, inappropriate, and could be discouraging; sometimes, however, it is inspiring.

The converse mistake is setting your sights to low in selecting critical competitors and that has no redeeming features. For example, it's a serious but common error in comparative road tests to run the Lexus 400 series against the BMW 5 series because they're in the same price bracket; the correct comparison is with the far more expensive BMW 7 series, because the overall performance is comparable. Superiority to the 5 series then is generated as a by product of the evaluation (adding the well-supported premise that the 7's are better than the 5s), and an important extra conclusion is achieved. Another example of context influencing the choice of critical competitors: if you are evaluating something simply because you have got to save money (and this or something else will have to be cut), you might want to focus entirely on a family of radically cheaper critical competitors, all the way down to the zero or no-treatment case (cancel the program entirely).

The crucial role of critical competitors in evaluative thinking and reasoning is now receiving confirmation from studies of general reasoning skills, where it is increasingly being emphasized that the identification or realistic alternatives is a key component in effective reasoning and its teaching. ***Ref. Teaching Thinking Skills: Theory and Practice***, edited by Boykoff and Sternberg (Freeman, 1987).   (Scriven, 1991)

Cross-Sectional Data
Observations collected on subjects or events at a single point in time. (BJA, 2003)

Culture
The shared values, traditions, norms, customs, arts, history, institutions, and experience of a group of people. The group may be identified by race, age, ethnicity, language, national origin, religion, or other social categories or groupings. (BJA, 2003)

Cultural Relevance
Demonstration that evaluation methods, procedures, and/or instruments are appropriate for the cultures to which they are applied. FOR EXAMPLE, having questionnaires available in multiple languages may make them more culturally relevant. (BJA, 2003)

D

Data
Documented information or evidence of any kind. (BJA, 2003)

Data Analysis
The process of systematically applying statistical and logical techniques to describe, summarize, and compare data. (BJA, 2003)

Data Collection Instrument
A form or set of forms used to collect information for an evaluation. Forms may include interview instruments, intake forms, case logs, and attendance records. They may be developed specifically for an evaluation or modified from existing instruments. (BJA, 2003)

Data Collection Plan
A written document describing the specific procedures to be used to gather the evaluation information or data. The document describes who collects the information, when and where it is collected, and how it is obtained. (BJA, 2003)

Database
A collection of information that has been systematically organized for easy access and analysis. Databases typically are computerized. (BJA, 2003)

Delphi Technique
A procedure used in a group problem solving or evaluating, involving – for instance – circulating a preliminary version of the problem or a questionnaire to all participants, calling for suggested rephrasings (or, less ideally, preliminary solutions). The rephrasings or preliminary solutions are then circulated for a vote on the version that seems most fruitful (and/or the preliminary solutions are circulated for rank ordering). When the rank orderings have been synthesized, *these* are circulated for another vote. Innumerable variations on this procedure are practiced under the title "Delphi Technique", and there is considerable literature on it. It is often done in a way that over constricts the input, for example, with a badly designed first questionnaire, which ruins it before it begins. In any case, the intellect of the organizer must be the equal of the participants or the best suggestions won't be recognized as such. A phone conference call may be more effective, faster, cheaper, perhaps with a second session after some written afterthoughts. But phone and face-to-face are subject to excessive influence by forceful participants. A *good* Delphi, using mail or fax, is worthwhile; they are rare. Originally used for forecasting, there are many possible uses in evaluation, with possible reductions in travel costs, etc. However, the choice of manager is crucial; and checks on censorship and the validity of synopses usually need to be arranged. Serious research on evaluation applications of this potentially useful methodology is badly needed. (Scriven, 1991)

Descriptive Statistic
A statistic used to describe a set of cases upon which observations were made. FOR EXAMPLE, the average age of a class in high school calculated by using all members of that class. (BJA, 2003)

Design
The overall plan for a particular evaluation. The design describes how program performance will be measured and includes performance indicators. (BJA, 2003)

Dichotomous Variable
A variable with only two possible values. FOR EXAMPLE, "sex." (BJA, 2003)

Discrete Variable
A quantitative variable with a finite number of attributes. FOR EXAMPLE, day of the month. (BJA, 2003)

Document Review
A technique of data collection involving the examination of existing records or documents. FOR EXAMPLE, the examination of court documents to collect offender sentences. (BJA, 2003)

E

Effectiveness
Ability to achieve stated goals or objectives, judged in terms of both output and impact. (BJA, 2003)

Efficiency
The degree to which outputs are achieved in terms of productivity and input (resources allocated). Efficiency is a measure of performance in terms of which management may set objectives and plan schedules and for which staff members may be held accountable. (BJA, 2003)

Evaluation
Evaluation has several distinguishing characteristics relating to focus, methodology, and function. Evaluation (1) assesses the effectiveness of an ongoing program in achieving its objectives, (2) relies on the standards of project design to distinguish a program's effects from those of other forces, and (3) aims at program improvement through a modification of current operations. (BJA, 2003)

Evaluation Parameters
An evaluation can be 'internally' specified by reference to ten parameters or characteristics. Some of these parameters are headings – that is, they unpack into several sub specifications.

They are: field, functions, generality (of conclusions required), analytic level (**global vs. component vs. dimensional**), logical type (grading, ranking, scoring, apportioning), criteria used, weights for criteria, standards used, synthesis procedure, and metric. Given the values of these for a particular evaluation, one can construct an 'evaluation profile' and this should point to an appropriate design or small group of possible designs. Appeal to six 'external parameters', which give us a profile of the environment for the evaluation, should limit the options still further. Some of these involve brief narrative descriptions, others require only descriptors. They comprise: client characteristics (needs, preferences, etc.); **background** (did someone else evaluate the same program [etc.] previously, and what happened then?); **stakeholders** (those who have some investment, ego or other, in the results of the evaluation); **audience**; constraints (ethical, legal, institutional, or ecological – e.g. on data access and news releases); **resources** (including expertise, workspace, finances), and so on. (It is likely that neither list is complete, although much revised.) Major intervening variables that we determine on the way to a design include evaluator credibility and evaluation credibility, both of which give us hints about required evaluator locus and credentials.

From this we develop a specification which might begin: "A rating (not just a ranking) of two alternative programs for training police sergeants in dealing with offers of bribes, neither having been previously evaluated, the client aiming to commit to one of them for three years…" (Scriven, 1991)

Evaluation Plan
A written document describing the overall approach or design that will be used to guide an evaluation. It includes what will be done, how it will be done, who will do it, when it will be done, and why the evaluation is being conducted. (BJA, 2003)

Evaluation Research
The original use of this term simply referred to evaluation done in a serious scientific way; the term the term was popular among supporters of the social **science model** of evaluation. That only made sense as long as there was no clearly mapped area for research *on* evaluation. It now seems preferable to use it exactly as we use terms like 'physics research' – to identify work that goes beyond routine application of long validated principles or techniques. In this sense, evaluation research has sub areas corresponding to (i) the various fields of applied evaluation, where both theoretical and applied research can be done, as well as the relatively routine applied work we normally think of as 'evaluation'; (ii) the core subject of evaluation, with its own subdivisions (the logic, history, sociology, etc., of evaluation in general), (iii) certain types of research in other fields where evaluation is of the essences, for example in pharmacology. It is not sharply distinguishable from other research, although it usually has explicitly evaluative conclusions (some work on the history of the subject does not). Other attempts to distinguish research from evaluation – some identify six or eight dimensions – distort or stereotype one or the other. For example, it is often said that evaluations are aimed at conclusions that are 'particularistic' or ideographic rather than general or nomothetic, the latter supposedly being the goal of the scientific researcher. This is wrong in both directions: evaluators are often set or undertake the task of evaluating the success of the newly discovered treatment (e.g., lithium for psychotics, or contract teaching), which of course requires a general conclusion, sampling, etc.; and scientists frequently spend their lives on

the study of individual cases (e.g., the genology of the Darling Scarp, the evolution of the universe). Of course, many studies in history or philosophy are essentially evaluative research, and may be studies of individuals or of generalizations or theories.

"Doing evaluations" or "being an evaluator" in the consultant or contract context *may* not involve anything that justifies the use of the term "research", but some applied personnel or program evaluation projects and contracts require a great deal of research and most require more than is usually done. In particular, every serious program evaluation, however constrained by time and budget, should consider the **generalizability** of the findings, since that bears on the value of the program. Publishable research will continue to come from evaluation practitioners as well as academics, as they do from clinical psychologists as well as experimental ones, and practitioners should be strongly encouraged to look for and develop the research issues in their work. The idea that evaluation practice, short of the big federal contracts, is something we can leave to "graduate students and graduates of master's level programs" as a recent article in ***Evaluation and Program Planning*** put it, seems comparable to the idea that local medical practice should be left to the RNs.   "Research *on* evaluation" always refers to work on evaluation methodology, theory, or meta-theory. (Scriven, 1991)

Evaluation Team
The individuals, such as the evaluation consultant and staff, who participate in planning and conducting the evaluation. Team members assist in developing the evaluation design, developing data collection instruments, collecting data, analyzing data, and writing the report. (BJA, 2003)

Ex-post Facto Design
A research design in which all group selection, pretest data, and posttest data are collected after completion of the treatment. The evaluator is thus not involved in the selection or placement of individuals into comparison or control groups. All evaluation decisions are made retrospectively. (BJA, 2003)

Experimental Data
Data produced by an experimental or quasi-experimental design. (BJA, 2003)

Experimental Design
A research design in which the researcher has control over the selection of participants in the study, and these participants are randomly assigned to treatment and control groups. (BJA, 2003)

Experimental Group
A group of individuals participating in the program activities or receiving the program services being evaluated or studied. Experimental groups (also known as treatment groups) are usually compared to a control or comparison group. (BJA, 2003)

External Validity
The extent to which a finding applies (or can be generalized) to persons, objects, settings, or

times other than those that were the subject of study. (BJA, 2003)

F

Field Trial
A dry run, a true test of a product or program (etc.). Absolutely mandatory in any serious evaluation or development activity. It is essential that at least one true field trial should be run in circumstances and with a population that matches the targeted situation and population. Earlier trials ("hothouse trials" or alpha tests) may not meet this standard, for convenience reasons, but the last one must. Unless run by external evaluators (very rare), there is a major risk of bias in the sample, conditions, content, or interpretations used by the developer in the final field trials. In the computer field, alpha tests can be hothouse, but there should also be **beta** tests. Few of the ones run today are true field trials, being notably different with respect to personnel involved and support available. (Scriven, 1991)

Focus (of a program)
A more appropriate concept for most evaluations than "goal"; both are theoretical concepts and both serve to limit complaints about things not done to the general area where resources are available and legitimately usable. The focus of a program is often improved by good evaluation. (Scriven, 1991)

Focus Groups
A term imported into the evaluation vocabulary from market research, especially in the automobile industry. It originally referred to groups of prospective purchasers brought in to use a new product not yet in final form, essentially a supervised beta test. However, the practice has been corrupted in many organizations to the point where it has been taken away from the engineering division and given to marketing, who uses it as a device for (i) creating an advertising campaign, by discovering what features of the product appeal – and do not appeal – to typical customers; or (ii) soliciting advanced orders for a product not officially on the market. In this role, the invitees are no longer a sample of typical end-users but purchasers for large accounts, many of whom are simply incompetent evaluators (read their comments in the press releases). Nothing wrong with all this, except (i) invitees are often told that this is a chance to improve the product, though its long past the last-revision point; and (ii) it substitutes for the beta testing, whose absence is obvious from the many gross flaws in the released products; *Consumer Reports*, buying new cars anonymously, finds an average of about 8-12 faults per car, often serious ones. (Scriven, 1991)

Formative Evaluation
Formative evaluation is contrasted with summative evaluation. It is typically conducted *during* the development or improvement of a program or product (or person, and so on) and it is conducted, often more than once, *for* the in-house staff of the program *with the intent to*

improve. The reports normally remain in-house; but serious formative evaluation may be done by an **internal** *or* an **external** evaluator or (preferably) a combination; of course, many program staff are, in an *informal* sense, constantly doing formative evaluation. The distinction between formative and summative evaluation has been well summed up by Bob Stake: "When the cook tastes the soup, that's formative; when the guests taste the soup, that's summative."

In an extended sense, formative evaluation should begin with evaluation of the proposal or concept underlying the proposal – this is sometimes called preformative evaluation. Very often, the difficulties that will plague the evaluation can be located in poor performative evaluation; but RFP's are often treated as if they do not need or it is somehow impertinent to suggest that they need evaluation. (Scriven, 1991)

G

Generalizability

1.   As a feature of evaluations: In the days before the New Era in evaluation, editors gave two reasons for rejecting evaluation reports. The first was that they were essentially subjective, and hence not scientific – since all evaluation was held to be essentially subjective. The second was that evaluation reports had no generalizable content, and hence were not scientific. The second view persists today, even in the evaluation community: R.M. Wolf, for example, in The Nature of Educational Evaluation, argues that: "Research is concerned with the production of knowledge that is as generalizable as possible…Evaluation, in contrast, seeks to produce knowledge specific to a particular setting." (Praeger, 1990, p.8). (i) While it is true that many program evaluations do, in fact, only concern themselves with the immediate issue of evaluating a particular implementation, this is to some degree a fault – at least a limitation – of the evaluation. The Key evaluation checklist recommends that all evaluations consider the generalizability of the evaluand as part of evaluating it, although financial constraints may put extensive investigation of this checkpoint beyond reach. (ii) Situation-specific evaluations are certainly not the only kind of evaluation – or even the only kind of program evaluation – that is or can be done. Comparative evaluations of the leading available hospice programs, done to assist local agencies determine which one to implement, can hardly be said not to be evaluations because they have general significance.

2.   As a concept related to external validity: Although external validity (Campbell's term, which he later unsuccessfully tried to rename 'proximal validity') is commonly equated with generalizability, it refers to only part of the latter concept (which includes 'distal validity'). Typically one wants to generalize to populations (and so on) essentially other than the one terted, not just extrapolably other; and it's not just population differences but treatment differences and effect differences that are of interest. (See the Generalizability checkpoint in the KEC.) In short, while the generalizabilty of external validity is akin to that of inferential statistics – we might

call it short distance generalization (so 'proximal' makes sense) – much more than that must be considered by the evaluator or the scientist, who are constantly pushing for long distance generalization, involving tenuous inductive or imaginative leaps. Generalization is thus often nearer to speculation than to extrapolation and a good evaluation needs to check these possibilities. The value of things or personnel is often crucially affected by their versatility, that is, their utility after transportation. Because the term means much more than the traditional scientific approach takes into account, it is common to suppose that evaluation practitioners are not concerned with it – only researchers. On the contrary , evaluation practitioners often are more concerned with it than researchers (in order to justify the cost of the evaluation and evaluand, and for humanitarian reasons), and should be encouraged to be more concerned with it more often than they are; moreover, they are in a much better position to estimate it than the researcher.

Notes: (i) In formative evaluation, considerations of generalizability can often lead to much improved market size and viability. (ii) With very large multisite projects, interpolation is often as critical as extrapolation. (Scriven, 1991)

Goal-Based Evaluation

Any type of evaluation based on and knowledge of – and referenced to – the goals and objectives of the program, person, or product. While the simplest form of this is **goal achievement** evaluation, a goal-based evaluation (GBE) can be much more sophisticated and fill many of the gaps in that approach. It may add a needs assessment so that the goals can be looked at critically; it may do some cost analysis or comparisons; perhaps it looks for side effects and checks on the ethics of the program's process. To the extent it does include these components, they are often *referenced* to the program's (or the person's) goals, and hence the approach is likely to be involved in serious problems such as identifying these goals, handling inconsistencies in them or false assumptions underlying them and changes in them over time, dealing with outcomes that represent shortfall and overrun goals, and avoiding the perceptual bias of knowing about them.

GBE is thus flawed, although a thorough approach of this type, done by experienced external evaluators, can cover much of what is needed in program evaluation. The strength of the approach is inversely related to the extent to which the goals are used as standards of merit. Goals have nothing to do with merit, only with management monitoring. Serious program evaluation must dig for the fundamental facts that determine merit – and bypass the bog containing the rhetoric of goals and objectives. (In fact, the digging is better done by people who are unaware of the program's goals; people who know them do not search with quite the same enthusiasm for what are seen as mere side effects.) The irony is that we do this all the time when we put on our consumer hats; no one evaluates cars in terms of the goals of the design team. Why the difference? The problem is that program evaluation was – and to a large extent still is – instigated by or controlled by managers, not consumers. Managers think in terms of the success of their plans and GBE thus tends to be manager-oriented evaluation, too close **monitoring** and too far from consumer-oriented evaluation (**goal-free evaluation**).

Four notes: (i) Defining evaluation as the study of the **effectiveness** or success of programs is often a sign of (often unconscious) acceptance of GBE, because these are goal-dependent notions. (ii) The problems with goal-based evaluation do not in any way count against *funding constraints*, for example, limitations on the type of grant or residence of grantee that are imposed on a foundation by its deed of gift. Insofar as 'success' is thought of as success within that area, it is a harmless and useful notion; it is only when it is referenced to the *specific* goals of a program or project that it becomes too narrow an approach. (One must move toward determining *comparative cost-effectiveness in meeting ranked true needs, including side-effects, generalizability, and ethical/legal considerations* – to give an oversimplified summary of the **KEC**.) (iii) The cost of finding, translating, and reconciling goals for major programs is enormous; the fact that it is unnecessary might be a good enough reason to switch to goal-free evaluation, all by itself. (iv) The best possible GBE approach goes a long way toward a goal-free front-end evaluation, with comments on goal-achievement only coming in at the end. Outstandingly good evaluations can be done using this 'goal-incidental' approach; the **GAO** approach does this, as does the OIG approach to some extent, and the **KEC** approach allows it. (Scriven, 1991)

Goal-Free Evaluation (GFE)

In the pure form of this type of evaluation, the evaluator is not told the purpose of the program but does the evaluation with the purpose of finding out what the program is actually *doing* without being cued as to what it is *trying* to do. If the program is achieving its stated goals and objectives, then these achievements should show up (in observation of process and interviews with consumers not staff); if not, it is argued, they are irrelevant. Merit is determined by relating program effects to the relevant *needs* of the *impacted* population, rather than to the *goals* of the program (whether the goals of the agency, the citizenry, the legislature, or the manager) for the *target* (intended) population. It could equally well be called "needs-based evaluation" or "consumer-oriented evaluation" by contrast with **goal-based** (or "manager-oriented") **evaluation**. It does not substitute the evaluator's goals nor the goals of the consumer for the program's goals, contrary to a common criticism; the evaluation must justify (via the needs assessment) all assignments of merit. The report should be completely transparent with respect to the evaluator's goals.

One of the major arguments for the pure form is that it is the only systematic or design procedure for improving the detection of side effects. Evaluators who do not know what the program is *supposed* to be doing look more thoroughly for what it is doing. Does this really produce much of an improvement over the sophisticated goal-based evaluator making a serious effort to find side effects? To date, the author knows of no pure GFE that has failed to uncover new and substantial side effects after a program has already been evaluated in a goal-based mode. Other arguments for it include: (i) it avoids the often expensive, always speculative, and time consuming problems involved in determining true current goals and true original goals, reconciling, and weighing them; (ii) it is less intrusive into program activities than GBE; (iii) it is fully adaptable to midstream goal or need shifts; (iv) it is less prone to social, perceptual, and cognitive bias because of reduced interaction with program staff; and (v) it is 'reversible', that is, one can begin an evaluation goal-free and switch to goal-based after a preliminary investigation thereby garnering the preceding benefits

(whereas if you begin goal-based, you can't reverse); (vi) it is less subject to bias arising from the desire to please the client because it's less clear what the client was trying to do.

Of course, in many cases an evaluator can hardly fail to form some idea of what the *general* goals of the program are from observing it – for example, teaching math to ninth grade students. But there are dozens of programs doing that; this one will have been funded because of some more specific goals, and it is those, which are disregarded and not speculated about, let alone made into the basic measuring rod for merit.

Even if one does not adopt the pure form of GTE, one can adopt an *approximation* to it, which means at least that one: makes no effort to pin down details of 'real' goals; keeps knowledge of the alleged goals to as few investigators as possible, and 'segregates' them; uses only very brief and vague descriptions of the goals even to them; and in general tries to make the field people work hard at the process of outcome-hunting across the full range of possibilities, and to make the interpretation staff work hard at tying effects to needs rather than to goals.

A somewhat better compromise is to use a hybrid form: for example, a design with a goal-free up to the point of a preliminary summary and then reverses. Or one may use a goal-free *strand* in an evaluation, with one or two socially isolated evaluators working on it. These hybrids are arguably superior to pure GFE, especially if the GF mid-stream report is submitted when completed. This ensures that the evaluators work under the pressure of GFE, and also that the manager gets feedback on how what may be a 'grand vision' is succeeding in its own terms.

GFE is generally disliked by both managers/administrators and evaluators, for fairly obvious reasons. For the evaluator, it raises anxiety by its lack of predeterminate structure and greatly increased risk ready-identified effects; for the manager, it raises anxiety by abandoning the standards of success that were built into the contract for the program.

It is also risky for the evaluator because the client may get a nasty shock when the report comes in (no prior hand-holding and early warning) and in the extreme case – euphemistically referred to as 'a learning experience' – the client may refuse to pay because of embarrassment at the prospect of having to pass the evaluation along to their funding agency, even though they requested GFE. (Of course, if the findings are invalid, the client should simply document this and ask for modifications.)

The shock reaction when GFE was introduced in the area of program evaluation – it is of course the standard procedure used by all consumers, including evaluators, when evaluating products – suggests that the grip of management bias on program evaluation was very strong, and it may indicate that managers felt they had achieved considerable control over the outcomes of GBEs.

GFE is somewhat analogous to double-blind design in medical research; even if the evaluator would like to give a favorable report (e.g., because of being paid by the program, or because hoping for future work from them) it is not (generally) easy to tell *how* to 'cheat' under GFE

conditions. The fact that the risk of failure by the evaluator is greater in GFE is desirable since it increases effort, identifies incompetence and improves the **balance of power**.

Doing GFE is a notably different and enlightening experience from doing the usual kind of evaluation. There is a very strong sense of social isolation, and one comes to be extremely conscious of the extent to which GBE evaluations are not really 'independent evaluations' even when they are called that; they are cooperative efforts, and hence easily co-opted efforts. One is also very conscious of the possibility of enormous blunders. It is good practice to use a metaevaluator and very desirable to use a team.

Although GFE is a method, the choice of it does not come from the same box as the choice of what is usually thought of as methods (quantitative vs, qualitative, survey vs. experiment, multiple perspectives vs. one right answer, etc.) It can be combined with any of them, only excluding GBE, and that only for a part of the investigation. (Scriven, 1991)

H

Halo Effect
Bias created by an observer's tendency to rate, perhaps unintentionally, certain objects or persons in a manner that reflects what was previously anticipated. (BJA, 2003)

Hawthorne Effect
A tendency of research subjects to act atypically as a result of their awareness of being studied, as opposed to any actual treatment that has occurred. FOR EXAMPLE, if a school principal observes a classroom of students reacting politely and enthusiastically to a new student teacher, such behavior could be a result of the principal's presence in the classroom, as opposed to the quality of the student teacher.   (BJA, 2003)

I

Impact
The ultimate effect of the program on the problem or condition that the program or activity was supposed to do something about. FOR EXAMPLE, a reduction in caries incidence as a result of a school-based sealant program. (There also may be unexpected or unintended impacts. (BJA, 2003)

Impact Evaluation
A type of outcome evaluation that focuses on the broad, long-term impacts or results of program activities. For example, an impact evaluation could show that a decrease in a community's crime rate is the direct result of a program designed to provide community policing. (BJA, 2003)

Inferential Statistic
A statistic used to describe a population using information from observations on only a probability sample of cases from the population. FOR EXAMPLE, the average age of a class in high school calculated using a random sample of members of that class. (BJA, 2003)

Informed Consent
A written agreement by the program participants to voluntarily participate in an evaluation or study after having been advised of the purpose of the study, the type of the information being collected, and how information will be used. (BJA, 2003)

Information System
An organized collection, storage, and presentation system of data and other knowledge for decision making, progress reporting, and for planning and evaluation of programs. It can be either manual or computerized, or a combination of both. (BJA, 2003)

In-Person Interviewing
Face-to-face interviewing. The interviewer meets personally with the respondent to conduct the interview. (BJA, 2003)

Internal Evaluator

Internal evaluators (or evaluations) are those done by project staff, even if they are special evaluation staff – that is, even if they are external to the production/writing/teaching/service part of the project. Usually internal evaluation is part of the formative evaluation effort, but long term projects have often had special summative evaluators on their staff, despite the low credibility (and probably low validity) that results. As we look at cases where the internal evaluators are separately housed and/or supervised, it becomes clear that the internal/external distinction can be seen as a difference of degree rather than kind. If the evaluator comes from the same institution but not from the same program we might call the evaluation partially external. Careful management, and high quality evaluation can offset the validity handicape, but not the credibility one. Ref: a special section on internal evaluation, edited by Sandra Mathison, in the Fall, 1991, issue of *Evaluation and Program Planning*. (Scriven, 1991)

Interrupted Times Series Design
The interrupted time series design involves repeated measurement of an indicator (e.g., reported crime) over time, encompassing periods both prior to and after implementation of a program. The goal of such an analysis is to assess whether the treatment (or program) has "interrupted" or changed a pattern established prior to the program's implementation. However, the impact of alternate historical events may threaten the interpretation of the findings. FOR EXAMPLE, an interruped times series study may collect quarterly arrest rates for drug related offenses in a given community for two years prior to and two years following the implementation of a drug enforcement task force. The analysis focuses on changes in patterns before and after the introduction of the program. (BJA, 2003)

Interval Estimate
General term for an estimate of a population parameter that is a range of numerical values.

(BJA, 2003)

Interval Measure
A quantitative measure with equal intervals between categories, but with no absolute zero. FOR EXAMPLE, IQ scores. (BJA, 2003)

Interval Scale
A measurement scale that measures quantitative differences between values of a variable, with equal distances between the values.

Interval Variable
A quantitative variable that attributes of which are ordered and for which the numerical differences between adjacent attributes are interpreted as equal. FOR EXAMPLE, Intelligence scores. (BJA, 2003)

Intervening Variable
A variable that causally links other variables to each other. In a causal model, this intermediate variable must be influenced by one variable in order for a subsequent variable to be influenced. FOR EXAMPLE, it may be expected that a vocational program will change an offender's employment status which will subsequently reduce recidivism. Participation in the vocational program would be the independent variable, employment status - the intervening variable, and rearrest - the dependent variable. (BJA, 2003)

Interviews
Interviews involve face-to-face situations or telephone contacts in which the researcher orally solicits responses. (BJA, 2003)

L

Likert Scale
A type of composite measure using standardized response categories in survey questionnaires. Typically a range of questions using response categories such as strongly agree, agree, disagree, and strongly disagree are utilized to construct a composite measure. (BJA, 2003)

Longitudinal Data
Sometimes called "time series data," observations collected over a period of time; the sample (instances or cases) may or may not be the same each time but the population remains constant. FOR EXAMPLE, quarterly arrest rates for drug-related offenses in a given city for a period of two years.

Longitudinal Study
The study of the same group over a period of time. These generally are used in studies of change. (BJA, 2003)

M

Mean
A measure of central tendency, the arithmetic average; a statistic used primarily with interval-ratio variables following symmetrical distributions. FOR EXAMPLE, the average age or average height of a group of middle school students. (BJA, 2003)

Median
A measure of central tendency, the value of the case marking the midpoint of an ordered list of values of all cases; a statistic used primarily with ordinal variables and asymmetrically distributed interval-ratio variables. (BJA, 2003)

Meta-evaluation

Meta-evaluation is the evaluation of evaluations – indirectly, the evaluation of evaluators – and represents an ethical as well as a scientific obligation when the welfare of others is involved. It can and should be done in the first place by an evaluator on his or her own work; although the credibility of this is poor, the results are considerable gains in validity. Meta-evaluation can be done by applying an evaluation-specific checklist, or a general checklist like the **Key Evaluation Checklist** (KEC) to the evaluation itself. (One could also use the **GAO** checklist.)

Meta-evaluation can be done formatively or summatively or both: Draft summative reports of a meta-evaluation, as in most evaluation, should (where possible) go to the evaluee – in this case, that happens to be the primary evaluator – for the correction of errors or the addition of **demurrers,** or endorsements, and when agreement is not reached, both the report and the demurrers should go to the client. Summative meta-evaluation gives the client independent evidence about the technical competence of the primary evaluator and, where not commissioned by the client, should be considered by the primary evaluator as an evaluation service to the client and a way to improve the primary evaluation.

Who evaluates the meta-evaluator? No infinite regress is generated because investigation shows it usually doesn't pay after the first metalevel on most projects and after the second on any.

Specific checklists developed for evaluating evaluations include the following three; the twenty items in the first one have been gathered from many sources. (i) The Meta-Evaluation Checklist (MEC). An evaluation should be conceptually clear, comprehensible in all details, comprehensive, cost-effective, credible, ethical, explicit about the standards of merit or worth used and about the justification for them, feasible (in terms of the resources available), appropriately but not excessively precise and robust, politically and psychologically sensitive, reported to appropriate audiences in an appropriate way (which often means multiple reports, not necessarily all written), relevant to the clients' and audiences' needs, secure, timely, and valid. Validity should be taken to include technical soundness, but may

require care with construct validity that goes beyond current technical resources . Note the absence of **implemented** as a criterion. (ii) Bob Gowin's **QUEMAC** approach provides another checklist addressed specifically at meta-evaluations. So do (iii) the **Evaluation Standards**. Ref: Daniel Stufflebeam, "Meta-evaluation: Concepts, Standards and Uses" in *Educational Evaluation Methodology: The State of the Art,* Ronald Berk, ed. (Johns Hopkins, 1981). (Scriven, 1991)

Mode
A measure of central tendency, the value of a variable that occurs most frequently; a statistic used primarily with nominal variables. (BJA, 2003)

Monitoring
An on-going process of reviewing a program's activities to determine whether set standards or requirements are being met. (BJA, 2003)

N

Nominal Variable
A quantitative variable whose attributes have no inherent order. FOR EXAMPLE, "sex" or "race." (BJA, 2003)

Nonequivalent Comparison Group Design
Evaluation designs that use nonrandomized comparison groups to evaluate program effects. Also referred to as quasi-experimental designs. (BJA, 2003)

Non-experimental Data
Data not produced by an experiment or quasi-experiment. FOR EXAMPLE, the data may be administrative records or the results of a survey. (BJA, 2003)

O

Objectives
The technical sense of this term refers to a fairly specific description of an intended outcome; the more general description, under which this and possibly other objectives are subsumed, is referred to as a goal. Bloom provided a major service to evaluation of educational and many other programs and curricula with the Taxonomy of cognitive objectives. It needs some supplementation, but was remarkably robust under thousands of critical reviews. (Scriven, 1991)

Observation
A data collection strategy in which the activities of subjects are visually examined. The

observer attempts to keep his/her presence from interfering in or influencing any behaviors. FOR EXAMPLE, watching an interrogation through a one-way mirror or collecting information on arrest techniques by Ariding along@ involve observation. (BJA, 2003)

One-group Designs
Research designs which study a single program with no comparison or control group. (BJA, 2003)

One-shot Case Study
The one-shot case study involves the measurement of an identified "outcome" after a treatment or program has been implemented. However, there are no measures taken or available for comparison (i.e., status before the program, or outcome of a comparison or control group). Without a comparison measure, there is no means for inferring that the "outcome" was actually influenced by the treatment or program. (BJA, 2003)

Open-ended Interview
An interview in which, after an initial or lead question, subsequent questions are determined by topics brought up by the person being interviewed; the concerns discussed, their sequence, and specific information obtained are not predetermined and the discussion is unconstrained, able to move in unexpected directions. (BJA, 2003)

Open-ended Question
A question that does not have a set of possible answers from which to make a selection but permits the respondent to answer in essay form. On a questionnaire, the respondent would write an essay or short answer or fill in a blank. During an interview, the respondent would give the interviewer an unstructured, narrative answer. The interviewer would record the response verbatim or select salient features. If a structured interview were used, a question might appear to be open-ended to the interviewee but could be "closed down" by the interviewer, who would have a set of alternative answers to check. (BJA, 2003)

Ordinal Scale Data
Data classified into exhaustive, mutually exclusive, and ordered or ranked categories. FOR EXAMPLE, a typical ordinal scale may involve responses of "very good," "good," "satisfactory," "poor," and "very poor." (BJA, 2003)

Ordinal Variable
A quantitative variable whose attributes are ordered but for which the numerical differences between adjacent attributes are not necessarily interpreted as equal. FOR EXAMPLE, amount of school completed - (1)elementary school, (2)middle school, (3)high school, (4)college. (BJA, 2003)

Outcome Evaluation
An evaluation used by management to identify the results of a program's effort. It seeks to answer management's question, "What difference did the program make?" It provides management with a statement about the net effects of a program after a specified period of operation. This type of evaluation provides management with knowledge about: (1) the

extent to which the problems and needs that gave rise to the program still exist, (2) ways to ameliorate adverse impacts and enhance desirable impacts, and (3) program design adjustments that may be indicated for the future. (BJA, 2003)

Outcome

Outcomes are usually the post-treatment effects; but there are often effects during treatment, for example, enjoyment of a teaching style, which we sometimes (casually) call process. In general, we should try to distinguish: immediate outcomes, end of treatment outcomes, and long-term outcomes to be discovered in follow-ups. It is hard to get funding for the latter, although they are often much the most important. (Scriven, 1991)

Outlier

Instances that are aberrant or do not fit with other instances: instances that, compared to other members of a population, are at the extremes on relevant dimensions. FOR EXAMPLE, while sentences for most criminal offenders may involve between one and twenty years, extreme cases may involve sentences (multiple consecutive sentences) of 300 years or more. (BJA, 2003)

Output

Immediate measures of what the program did. FOR EXAMPLE, the output of a drug enforcement team may include the amount of marijuana shipments seized, the number of drug rings investigated, and the number or drug arrests made. (BJA, 2003)

P

Process

What happens between input and output, between start and finish. Generalized to mean any characteristics other than input or output variables. As the name of one of the checkpoints in the Key evaluation checklist, it refers to the legitimate use of *process evaluation*, as described below. (Scriven, 1991)

Process Evaluation

Usually refers to an evaluation of the treatment (or evaluand) that focuses entirely on variables between input and output (but it may include **input** variables); can also refer to the process *component* of a full evaluation. With exceptions to be mentioned, the process-only approach is illegitimate or a second choice except where a highly reliable connection is known to exist between process variables and outcome variables *and* if no more direct and reliable approach is available. Process evaluation is rarely the approach of choice because of the connections with output quantity and quality, where they do exist, are relatively weak, often transient, and likely to generalize poorly to new situations; and the output, not the process, is the reason for the program. The classic case of improper use is the evaluation of teachers by classroom observation (the usual procedure K-12). Observing the teaching process can only provide a legitimate basis for negative evaluations, never for positive ones

and is hence a seriously flawed approach. The major extenuating circumstance that can be used to justify process evaluation as the sole approach is the impossibility of doing outcome evaluation, for example because a decision must be made before the outcomes can be studied, or because resources are not available for doing an outcome study (for good reason).

However, certain aspects of process *must* be looked at *as part of any comprehensive evaluation,* not as a substitute for inspection of outcomes (and other factors); these aspects cannot be replaced by study of outcomes. They include the legality process, its mortality, its enjoyability, the truth of any claims involved in it, its implementation of the supposed treatment, and whatever clues it can provide about the subject to use the term "**mediated evaluation**" to refer to what is describes ad process evaluation in the opening sentence of this entry, and allow "process evaluation" to refer to the direct (not mediated) evaluation of process variables as part of an overall evaluation that involves looking at outcomes. It is in the latter sense that the term is used in the **Key evaluation checklist**.   The irony of the usual process of teacher evaluation is that the aspects of the teaching process that can be legitimately looked at are usually ignored. These include accuracy and completeness of content (of presented material and answers to questions); test construction, use and marking; quality and timeliness of feedback to students; attendance/punctuality; and the scrupulous avoidance of bias.

Process checks include an even wider variety of considerations: when evaluating a certain type of scholarly article, one process indicator is adequacy of the literature search; often, checking for sexist language is also relevant, as it is to curriculum or instructor evaluation; so is checking on the ethicality of testing procedures; on the accuracy of warranty claims; and on the validity of instruments used. A somewhat different type of indicator is provided by patterns that may be clues to causal connections. Thus some of these process checks lead to changes in the basic description of the evaluand; some to changes in outcomes or costs; some finish up as ethical conclusions about the process that do not have to relate to the needs assessment in order to graduate into the final report. (Scriven, 1991)

Program Evaluation
        The largest area of evaluation to which a self-conscious specialty has been devoted, although product evaluation may be the largest area of practice. Program evaluation has a long history as a practice, but only became a recognized specialty in the 1960s. Earlier and notable efforts at the practice, in the U.S., include Rice's monumental Philadelphia study of the spelling bee approach in 1897, and Tyler's groundbreaking conceptualizations in the 1930s and 1940s. Much of this book refers to issues in program evaluation, and the **Key evaluation checklist** outlines one approach. The three most active sub areas are education, health, and 'criminal justice' (the jargon term for law enforcement activities). These now have much too little to do with each other and are suffering from the isolation. (Scriven, 1991)

Q

Qualitative Analysis
An analysis that ascertains the nature of the attributes, behavior, or opinions of the entity being measured. FOR EXAMPLE, in describing a person, a qualitative analysis might conclude that the person is tall, thin, and middle-aged. (BJA, 2003)

Qualitative Data
Information that is difficult to measure, count, or express in numerical terms. For example, how safe a resident feels in his or her apartment is qualitative data. (BJA, 2003)

Qualitative Research
Research involving detailed, verbal descriptions of characteristics, cases, and settings. Qualitative research typically uses observation, interviewing, and document review to collect data. (BJA, 2003)

Quantify
To attach numbers to an observation. (BJA, 2003)

Quality Control
A procedure for keeping quality of inputs or outputs to specifications. (BJA, 2003)

Quantitative Data
Information that can be expressed in numerical terms, counted, or compared on a scale. FOR EXAMPLE, the number patients who participate in a tobacco cessation program in a month. (BJA, 2003)

Quantitative Analysis
An analysis that ascertains the magnitude, amount, or size, for example, of the attributes, behavior, or opinions of the entity being measured. FOR EXAMPLE, in describing a population, a quantitative analysis might conclude that the average person is 5 feet 11 inches tall, weighs 180 pounds, and is 45 years old. (BJA, 2003)

Quantitative Research
Research that examines phenomenon through the numerical representation of observations and statistical analysis. (BJA, 2003)

Quasi-experimental Design
A research design with some, but not all, of the characteristics of an experimental design. While comparison groups are available and maximum controls are used to minimize threats to validity, random selection is typically not possible or practical. (BJA, 2003)

Questionnaires
The basic instrument for surveys and structured interviews. Design of *good* questionnaires is far more difficult than most people realize; and getting the kind of response rate on which

policy can be built – in the 80% and often the 90% range – is still more difficult, although it is certainly possible and regularly achieved by the best people in the business. (i) Questionnaires are usually too long for the job to be done, often by a factor of three or five. This not only reduces response rate but also validity (because it encourages stereotyped, omitted, or superficial responses). (ii) They must be pilot-tested, preferably with subjects who free-associate as they fill it in (to an observer or a tape-recorder, either better than requiring them to make notes). (iii) Usually a second pilot-test still uncovers problems, especially of ambiguity. (iv) High response requires multiple follow-ups, including mail and phone. (v) Likert scales ("Agree strongly…Disagree strongly") are sometimes valuable, but sometimes just an attempt to avoid calling for an evaluative response ("Excellent…Worthless"), which is what you need. (vi) Response scales with an even number of points may not avoid fence sitting – they may convert it into pseudo-effects. (Scriven, 1991)

R

Reporting
The process of communicating results to the client and audiences. It may be best done orally rather than in writing, or (more commonly) by using both modalities; across time rather than at one time; using completely different versions for different audiences or just one version. This is one of several areas in evaluation where creativity and originality are really important, as well as knowledge about **diffusion and dissemination**. Reports should be designed on the basis of some serious thinking or research about audience needs as well as client needs. Multiple versions may use different media as well as different vocabularies. Reports are products and should be looked at in terms of the KEC – field-testing them is by no means inappropriate. Who has time and resources for all this? It depends on the size of the project and whether you are really interested in utilization of the evaluation. Would you write it in Greek? No, so should you *assume* that you are *not* writing it in the *equivalent* of Greek, as far as your audiences are concerned? While comprehensibility is a necessary condition for accessibility, there are other dimensions, such as the dissemination procedures (should an account be published as well as delivered, and to whom?) and *radical* format issues (should pocketable versions be printed, or disk versions; should it go up on an electronic bulletin board?). (Scriven, 1991)

S

Side Effects
Side effects are the (good and bad) effects of a program or product (etc.) other than those for which it was implemented or purchased. Sometimes the term refers to effects that were expected and might even have been desired but are not part of the goals of the program, such as employment of staff. Typically, they have not been expected predicted, or anticipated (a minor point). They may, however, be far more important than the intended effects, for

example, in drug side effects. In the KEC a distinction is made between (i) side effects and (ii) unintended effects on non target populations that are in fact impacted, that is, side-*populations*, but both are often called side effects. Side effects identification presents a methodological problem in that evaluators are usually cued to find the intended effects (**goal based evaluation**) and their clients are usually much more interested in progress toward the intended effects. The inevitable result of this combination of 'sets' is that the search for side effects is often perfunctory; **goal-free evaluation** is a deliberate attempt to improve side effect detection, and has in fact often been successful in doing so. The most important general side effect of *evaluation,* by contrast with side effects of a program, should be increased use of evaluation where it can be useful, and some skills in how to do it. So the evaluator should always think of being a role model and a teacher, not just a critic and remediator. (Scriven, 1991)

Stakeholder

(in a program) One who has substantial ego, credibility, power, futures, or other capital invested in the program, and thus can be held to be to some degree at risk with it. This includes program staff and many who are not actively involved in the day-to-day operations – for example, inventors or investigators or supporters of the program. Opponents are also, in a sense, stakeholders – like those who sell stock short or bet on a competing horse. Stakeholders may not even be aware that they are stakeholders (e.g., investors holding South African stock through a mutual fund, or those, such as environmental activists groups, who have an interest even if they have never heard of the program). **Recipients** are only stakeholders in an indirect sense and are normally dealt with separately. Taxpayers are not significant stakeholders in most programs, since their stake in any particular program is usually small. For ethical reasons they still have to be considered because a policy of ignoring such small interests would, if generalized, lead to the absurd conclusion that taxpayers have no interest in the whole set of tax-funded programs. (Scriven, 1991)

Summative Evaluation

Summative evaluation of a program (or other evaluand) is conducted *after* completion of the program (for ongoing programs, that means after stabilization) and *for* the benefit of some *external* audience or decision-maker (for example, funding agency, oversight office, historian, or future possible users), though it may be *done* by either **internal** or **external** evaluators or a mixture. The decisions it services are most often decisions between these options: export (generalize), increase site support, continue support, continue with conditions (probationary status), continue with modifications, discontinue. For reasons of credibility, summative evaluation is much more likely to involve external evaluators than is a formative evaluation. It should not be confused with **outcome evaluation**, which is simply an evaluation *focused on* outcomes rather than on process – which could be either formative or summative. (This confusion occurs in the introduction to the ERS *Evaluation Standards*, 1980 Field Edition). It should also not be confused with **global** (holistic) evaluation – summative evaluation may be global *or* **analytical.** Where a summative evaluation is done of a program that has stabilized but is still running, the aim is the same: to report *on* it, not to report to it. (Scriven, 1991)

Surveys
Data collection techniques designed to collect standard information from a large number of subjects. Surveys may include polls, mailed questionnaires, telephone interviews, or face-to-face interviews.

T

Testing Bias
Bias and foreknowledge introduced to participants as a result of a pretest. The experience of the first test may impact subsequent reactions to the treatment or to retesting. (BJA, 2003)

Test-retest
Administration of the same test instrument twice to the same population for the purpose of assuring consistency of measurement. (BJA, 2003)

Time-series Designs
Research designs that collect data over long time intervals - before, during, and after program implementation. This allows for the analysis of change in key factors over time. (BJA, 2003)

Trend
The change in a series of data over a period of years that remains after the data have been adjusted to remove seasonal and cyclical fluctuations. (BJA, 2003)

Triangulation
The combination of methodologies in the study of the same phenomenon or construct; a method of establishing the accuracy of information by comparing three or more types of independent points of view on data sources (for example, interviews, observation, and documentation; different times) bearing on the same findings. Akin to corroboration and an essential methodological feature of case studies. (BJA, 2003)

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Sample Evaluation Instruments

a. Students

There have been several domains suggested to evaluate the impact of service-learning on students (Gelmon, 2001):

- Community awareness
- Community involvement
- Commitment to service
- Career development
- Self-awareness
- Leadership
- Awareness of determinants of health
- Understanding of course content
- Sensitivity to diversity
- Self-confidence
- Responsibility
- Communication skills
- Valuing of pedagogy of multiple teachers

Survey

Surveys can be used to assess the students' attitudes on the aforementioned domains in relation to their service-learning curriculum. In order to have a more thorough understanding of the impact of the service-learning activities, it is advisable to also collect information on demographic variables such as age, gender, race and ethnicity.

One of the key decisions is if you intend to administer the survey to different groups of students or to the same students before and after their service-learning activities. It is important to keep in mind that few students will have a dramatic change in their scores after one course. However, the survey instruments can be a valuable addition to other data collection instruments in providing a comprehensive understanding of the impact of the service-learning program. (Gelmon, 2001)

Service-Learning Student Survey

Adapted from: Shinnamon, A et al (1999) Methods and Strategies for Assessing Service-Learning in theHealth Professions

We would like to better understand the impact that service-learning has had on our students. We particularly want to know how these experiences have influenced your perspective on learning, your view of service, your choice of career/specialization and your perspectives on working in a diverse community. The information collected in this survey is anonymous and will only be reported in aggregate. Should you have nay questions regarding this survey, please contact _____

I.   First we would like to know some information about you.

1. What is your age group?   Under 22 ☐   22-25 ☐   26-29 ☐   30-33 ☐   34 + ☐

2. What is your gender?   Male ☐   Female ☐

3. What is your racial background?   ☐ African American   ☐Asian American
☐Caucasian/white   ☐ Native American
☐Asian   ☐Other _____

4. Do you consider yourself to be Hispanic: Yes ☐   No ☐

5. In what type of agency did you have your service-learning experience? *(check all that apply)*

☐	Hospitals	☐	Prisons
☐	Community/Rural health centers	☐	Nursing Homes
☐	Mobile Dental Clinic	☐	Cultural Centers
☐	Assisted Living Centers	☐	HeadStart Centers
☐	Schools (Public or Private)	☐	Senior Centers
☐	Public Health Agencies	☐	Homeless Shelters
☐	Churches	☐	Other_____

6. How many hours per week did you spend on structured service-learning activities?
☐ 0 hrs/wk   ☐ 1-10 hrs/wk   ☐ 11-20 hrs/wk   ☐ 21-30hrs/wk   ☐ 31-40 hrs/wk

8.   What community needs did you address in your service-learning activities?
(check all that apply)
☐ AIDS/HIV   ☐ Disability issues   ☐ Elderly care
☐ Homelessness   ☐ Mental health   ☐ Substance abuse
☐ Domestic Violence☐ Women's health   ☐ Youth issues
☐ Diabetes   ☐ Oral Health   ☐ Tobacco
☐ Other(please specify):_____

8. In addition to school, I have a paying job that requires me to work…
☐ 0 hrs/wk   ☐ 1-10 hrs/wk   ☐ 11-20 hrs/wk   ☐ 21-30hrs/wk   ☐ 31-40 hrs/wk

II. Next, we would like to gain your perspective about the service-learning course(s) in which you participated.

Please indicate your level of agreement with the following statements

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
9. The community participation aspect of the course helped me to see how course material I learned can be used in everyday life.	☐	☐	☐	☐	☐
10. Participation in service-learning helped me to better understand the material from my lectures and readings.	☐	☐	☐	☐	☐
11. I feel I would have learned more from the courses if more time was spent in the classroom instead of in the community.	☐	☐	☐	☐	☐
12. Service-learning should be implemented into more classes at my school.	☐	☐	☐	☐	☐
13. My service-learning experience was not directly linked to building clinical skills.	☐	☐	☐	☐	☐
14. Participation in service-learning made me take more responsibility for my own learning.	☐	☐	☐	☐	☐
15. Community service should be a voluntary activity rather than a course requirement.	☐	☐	☐	☐	☐
16. Service-learning made me more aware of the roles that dental professional can have in the community.	☐	☐	☐	☐	☐
17. Service-learning made me more aware of the roles of health professionals in other disciplines besides my own.	☐	☐	☐	☐	☐

III. The next set of questions relates to your attitude toward community involvement.
Please indicate your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
18. I was already volunteering before this service-learning experience.	☐	☐	☐	☐	☐
19. The community participation aspect of service-learning showed me how I can become more involved in my community.	☐	☐	☐	☐	☐

IV. Next, we would like to know the influence of your service-learning on your future professional work.
Please indicate your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
20. I will continue involvement specifically with my service-learning site.	☐	☐	☐	☐	☐
21. I feel that the work I did through service learning benefited the community.	☐	☐	☐	☐	☐
22. I probably won't volunteer or continue community involvement after this course.	☐	☐	☐	☐	☐
23. Service-learning helped me to become more aware of the needs in the community.	☐	☐	☐	☐	☐
24. I have a responsibility to serve the community.	☐	☐	☐	☐	☐

V. Finally, we would like some personal reflections on your service-learning experience(s).
Please indicate your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
25. Doing work in the community helped me to define my personal strengths and weaknesses.	☐	☐	☐	☐	☐
26. Performing work in the community helped me clarify my career/specialization choice.	☐	☐	☐	☐	☐

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
27. I will integrate community service into my future career plans.	☐	☐	☐	☐	☐
28. I developed a good relationship with my service-learning instructor(s) because of the community work.	☐	☐	☐	☐	☐
29. During this experience, I became more comfortable working with people different from myself.	☐	☐	☐	☐	☐
30. Service-learning made me more aware of some of my own biases and prejudices.	☐	☐	☐	☐	☐
31. Participating in the community helped me enhance my leadership skills.	☐	☐	☐	☐	☐
32. The work I performed in the community enhanced my ability to communicate my ideas in a real world context.	☐	☐	☐	☐	☐
33. I can make a difference in the community.	☐	☐	☐	☐	☐

34. Please add any other comments you have about your service-learning experience(s). (*Please use the back of this paper or attach an additional sheet of paper.*)

Thank you for your insights regarding service-learning.

Please return this survey in the enclosed envelope by *date* to:

Student Pre-Test

Adapted from: The Higher Education Service-Learning Surveys (1999) which were developed by D. Diaz Gallegos, A. Furco & H. Yamada

This survey is designed to measure general attitudes and perceptions of dental (hygiene) students. As part of this study, we would like to know about your experiences and opinions now as well as at a later date. This information will be useful in understanding and later enhancing service-learning programs on campus.

Please respond as honestly as possible, relying on your current feelings of the particular issues raised. Your responses will be kept confidential. Your name will not be connected to specific results of the survey. All parts of the survey should be completed.

- -

Section I

1. Write your birthdate in numbers in the space below:

> _ _ / _ _ / _ _
> month day   year

2. Write your initials (first and last) in the two spaces below:

> ___   ___
> First letter   First letter
> of **first** name of   **last** name

3. Your gender: o Male   o Female

4. Your ethnicity (please check all those that apply):   [Optional]

> African American   ___
> Asian American/Pacific Islander   ___
> Caucasian (non-Latino/Latino)   ___
> Latino/Latino   ___
> Native American/Alaskan Native ___
> Other (Specify) _____

Section II

Please indicate how strongly you agree or disagree with each statement at this point in time. Circle the number that best describes your response (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree).

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I find the content in school courses intellectually stimulating.	1	2	3	4
2. The extent of my achievement is often determined by chance.	1	2	3	4
3. I have a realistic understanding of the daily responsibilities involved in being a dentist (dental hygienist)	1	2	3	4
4. Being involved in a program to improve my community is important.	1	2	3	4
5. I learn more when courses contain hands-on or experiential component.	1	2	3	4
6. I am concerned about local community issues.	1	2	3	4
7. It is important for me that my career directly benefits others.	1	2	3	4
8. I can make a positive difference in my life.	1	2	3	4
9. I like it when I get to make decisions in my work.	1	2	3	4
10. I feel that I have little control over the things that happen to me.	1	2	3	4
11. The things I learn in school are useful in my life.	1	2	3	4
12. I have definite career plans.	1	2	3	4
13. It is not necessary to volunteer my time to help people in need.	1	2	3	4
14. Courses in dental (hygiene) school make me think about real-life in new ways.	1	2	3	4

	Strongly Disagree	*Disagree*	*Agree*	*Strongly Agree*
15. What happens to me is my own doing.	1	2	3	4
16. It was important for me to choose a career that will make contributions to society.	1	2	3	4
17. I possess the necessary personal qualities to be a successful dentist (dental hygienist).	1	2	3	4
18. Sometimes I am not as reliable as I should be.	1	2	3	4
19. Giving some of my income to help those in need is something I should do.	1	2	3	4
20. I feel that I can have a positive impact on local social problems.	1	2	3	4
21. I enjoy learning in school when course materials pertain to real-life.	1	2	3	4
22. I think that people should find time to contribute to their community.	1	2	3	4
23. When I am put in charge of a project, I sometimes wonder whether I can succeed at it.	1	2	3	4
24. I feel well-prepared for my career.	1	2	3	4
25. I do not find courses in school relevant to my life outside of school.	1	2	3	4
26. I plan to improve my neighborhood in the near future.	1	2	3	4
27. It is important that I work toward equal opportunity (e.g., social, political, vocational) for all people.	1	2	3	4

Section III

Where appropriate, please indicate the number of hours.
If not applicable, please fill the blank with a "0."

1. I am employed _____ hours per week.

2. I am engaged in non-school related, volunteer work _____ hours per week
   (e.g. religious activities, tutoring, mentoring, big brother, big sister,
   girls/boys scout leaders, health-care provider, etc.)

THANK YOU FOR YOUR TIME !

Open ended questions that can be added at post survey

1. What was the name of the community agency in which you served (optional)?

2. What type of service did you perform?

3. Approximately how many hours per week were you involved in this service?

4. Do you plan to continue your service activities with this agency?

5a. Do you intend to continue to serve in your community after you graduate?

5b. If yes, please describe how.

6.   Did the service-learning component of this course meet your expectations? Why or why

 not?

7. What have you learned about yourself or others since becoming involved in the service-

 learning component of this course?

8. What suggestions, if any, do you have for improving the service-learning program

 component of this course?

Focus Groups

The purpose of the focus groups is to bring students together to discuss their service learning experiences and through this process, identify information on trends and common experiences that can be used to assess the impact on students as well as potential areas for program improvement.

Preparation:

- Determine who will facilitate the focus groups. The facilitator should not be the program director or program faculty. It is important to get a facilitator who does not have a vested interest in the outcome of the focus groups in order to limit the chance of bias introduced into the responses as well as ensuring that the students will feel more comfortable discussing the program openly. The facilitator is responsible for asking the questions, maintaining a neutral stance, ensuring that all participants have an opportunity to voice their opinions, that a few individuals do not dominate the discussion, and keep to the allotted time schedule.

- Arrange for a room which will allow participants to be arranged in a circle to facilitate dialogue.

- Program Director and Faculty should not be present at the focus groups for the aforementioned reasons

- Assign students into groups of no more than 12 per group.

- Session should be from 1 – 1.5 hours in length

- Arrange for the sessions to be recorded

- Arrange for a note taker. The notetaker is responsible for operating recording equipment, changing tapes if necessary, and recording verbal and non-verbal communication.

- Identify goals and objectives of session based on evaluation questions

- Develop 5 – 7 questions that will allow you to answer the evaluation questions

Implementation:

- Arrange seats in a circle in order to maximize interaction

- Introduce students to the purpose of the focus group and provide ground rules:

  o Welcome

  o Introduction of facilitator and notetaker (define roles)

  o Goals for session

  o Session rules:

    ▪ Everyone's opinion is valid

    ▪ There are no right or wrong answers

    ▪ Please be truthful and candid when giving your responses

    ▪ Differing opinions are expected and welcome

    ▪ It is not necessary to come to consensus on any disagreements

    ▪ Be as brief and to the point with answers as possible

    ▪ Only one person can speak at a time so that no information is lost

    ▪ If you want to ensure anonymity, instruct the students to refrain from using their names or others names in the room

- Inform the students that the session is being tape recorded. However, only the person transcribing the discussion will listen to the tape and the transcribed document will not contain anyone's name to ensure confidentiality.

- Wrap up and thank the participants from coming

Possible Focus Group Questions:

1. Briefly describe your service-learning experience.
2. What was it like to work with members of the community?
3. What were your expectations for the service-learning program?
4. How did the actual service-learning experience compare to your expectations?
5. Describe the relevance of your service-learning experience to your didactic coursework. (connections with lectures, reading assignments, clinical experiences)
6. What did you learn about the community or society from this experience?
7. Do you consider your service-learning experience valuable or of little value? What were the factors that were most influential in determining the value of your experience?
8. Did you learn anything new about yourself or develop new skills as a result of the service-learning experience?
9. Has the service-learning experiences changed how you intend to practice dentistry when you graduate?
10. What could we do to improve the experience of future students?

Data Analysis: See Section on Qualitative Data Analysis

b. Community Partners

The community partner is the cornerstone on which all service-learning activities are built. Despite this, many educational institutions fail to adequately evaluate the impact of service-learning activities on the community partner and the community it serves. In order to develop and maintain a true partnership where the needs of both partners are considered equally, it is essential to work with the community partner to develop evaluation questions and methods that will be useful and relevant to their organization and clients. To that end, the following key concepts have been identified as important when thinking about evaluating community partners (Gelmon, 2001).

- Capacity to fulfill mission
- Economic benefits
- Social benefits
- Nature of community-campus partnership
- Nature of community-campus interaction
- Satisfaction with partnership
- Sustainability of partnership

Service-Learning Community Partner Survey

Adapted from: Shinnamon, A et al (1999) Methods and Strategies for Assessing Service-Learning in the Health Professions

We would like to better understand the impact that service-learning had on our community partners. We particularly want to know how this experience has influenced your view of university-community partnerships. The information collected is
anonymous and will only be reported in aggregate. Should you have any questions regarding this study, please contact _____.

I. First, we would like to know some information about you and your organization.

1. What type of organization do you work for?

☐   Hospitals   ☐   Prisons
☐   Community/Rural health centers   ☐   Nursing Homes
☐   Mobile Dental Clinic   ☐   Cultural Centers
☐   Assisted Living Centers   ☐   HeadStart Centers
☐   Schools (Public or Private)   ☐   Senior Centers
☐   Public Health Agencies   ☐   Homeless Shelters
☐   Churches   ☐   Other_____

2. What is the focus of your **organization**?
☐ AIDS/HIV   ☐ Disability issues   ☐ Elderly care
☐ Homelessness   ☐ Mental health   ☐ Substance abuse
☐ Domestic Violence ☐   Women's health   ☐ Youth issues
☐ Diabetes   ☐ Oral Health   ☐ Tobacco Cessation
☐ Other(please specify):_____

4. Was this your first experience with service-learning students?   ☐ Yes   ☐ No

II. Next, we would like to gain your perspective about the service-learning courses.
Please indicate your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5. Service-learning helps prepare dental (hygiene) students for their careers.	☐	☐	☐	☐	☐
6. The students' experience with service learning helped them to see how classroom material can be used in everyday life.	☐	☐	☐	☐	☐
7. Service-learning should be implemented into more classes at the University.	☐	☐	☐	☐	☐
8. The goals for the student's service-learning assignment were clear to me.	☐	☐	☐	☐	☐
9. Service-learning students were well prepared to fulfill their assigned roles in our agency.	☐	☐	☐	☐	☐

III. The next set of questions relates to your attitude toward community involvement.
Please indicate your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
10. The community served by our agency benefited from the activities of the service learning students.	☐	☐	☐	☐	☐
11. Participation in the service-learning program made the University more aware of the needs in the community.	☐	☐	☐	☐	☐
12. I felt valued as a teacher by the University faculty.	☐	☐	☐	☐	☐
13. Participation in the service-learning program had valuable social benefits for my organization.	☐	☐	☐	☐	☐
14. Participation in the service-learning program produced economic benefits for my organization.	☐	☐	☐	☐	☐

IV. Next, we would like some of your personal reflections on the service-learning experience.
Please indicate your level of agreement with the following statements.

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
15. I developed a good relationship with the students from the service-learning course.	☐	☐	☐	☐	☐
16. I developed a good relationship with the faculty from the service-learning course.	☐	☐	☐	☐	☐
17. I see myself as a mentor to the students.	☐	☐	☐	☐	☐
18. Because of this experience, I am more interested in developing an extended partnership with the University.	☐	☐	☐	☐	☐
19. This project made more me aware of some of my own biases and prejudices.	☐	☐	☐	☐	☐
20. In general, the benefits of working with service-learning students outweighed any burdens it may have added to our work.	☐	☐	☐	☐	☐
21. I anticipate that the relationship we have developed with the University will continue.	☐	☐	☐	☐	☐

III. The next set of questions relates to your satisfaction with your roles and responsibilities.

Please indicate how satisfied you were with your opportunities to have the following roles and responsibilities:

	Strongly Dissatisfied	**Dissatisfied**	**Neutral**	**Satisfied**	**Strongly Satisfied**
22. Evaluating students	☐	☐	☐	☐	☐
23. Designing curriculum	☐	☐	☐	☐	☐
24. Facilitating student reflection	☐	☐	☐	☐	☐
25. Participation in the classroom	☐	☐	☐	☐	☐
26. On-site supervisor of students	☐	☐	☐	☐	☐

IV. Finally, we have some questions about the process of participating in the service-learning partnership.

27. What were your reasons for deciding to participate with the University in their service-learning course(s)? *Please indicate all responses that apply and rank them in order of importance (1= most important, 2= next most important, etc.).*

_____Wanted to try something new
_____Positive prior experience with students
_____Curiosity
_____Needed additional help
_____Wanted professional recognition
_____Wanted to make a connection with the University
_____Incentives from the University
_____Encouragement from peers
_____Encouragement from administration within my organization
_____Wanted to influence the training of future health professionals
_____Other (please specify): _____

28. How did you handle the logistics of the students' experience? *Please check the most accurate response.*

☐ I made the arrangements and placements

☐ The students and I worked together on the arrangements and placements.

☐ Students handled their own arrangements and placements.

☐ University personnel handled the arrangements and placements.

☐ Other (please specify):

29. Based on my experience with the service-learning program, my most serious concerns about serving as a community partner are: *Please indicate all responses that apply and rank them in order of importance (1= most important, 2= next most important, etc.).*

_____Time constraints of the academic world

_____Coordination of placements

_____Supervision of students

_____Training/orienting students

_____Communication with the University

_____Time commitment to supervise students

_____Time commitment to evaluate students

_____Trust/confidence in students

_____The human, fiscal and physical resources required

_____Other (please specify): _____

30. Student involvement in our organization has had an impact on the following:
Please indicate all responses that apply and rank them in order of importance (1= most important, 2= next most important, etc.).

_____Saved us money because of the additional help

_____The students brought new energy to the agency

_____Raised our public profile because of University involvement

_____Increased our awareness of organizational operations

_____Increased our access to University resources

_____Facilitated networking with other community agencies

_____Other (please specify):_____

31. Please add any other comments you have about teaching service-learning courses. *(Please use the space below or attach an additional sheet of paper.)*

Thank you for your insights regarding service-learning.

Please return this survey in the enclosed envelope by *date* to:

Community Agency Survey

Agency:_____   **Date** _____

Name/Position:_____

Please indicate the category to which your agency belongs (check all that apply):

_____ CRIMINAL JUSTICE/PRISON

_____ CULTURAL/ETHNIC

_____ DISABILITY

_____ ENVIRONMENT

_____ GOVERNMENT/PUBLIC HEALTH

_____ HEALTH (OTHER_____)

_____ HIV/AIDS

_____ HOMELESSNESS & HUNGER

_____ INTERNATIONAL

_____ MENTAL HEALTH

_____ ORAL HEALTH

_____ SENIORS

_____ TUTORING/MENTORING

_____ WOMEN

_____ YOUTH

_____ OTHER _____

1. How many years have you mentored dental (hygiene) students at your agency?_____

2. How would you characterize your interaction with the students from this school program volunteering at your agency? Circle one response.

No interaction	Minimal interaction	Some interaction	Much interaction
1	2	3	4

3a. To what extent did these students help meet the needs of your agency?

Not at all		To some extent		To a great extent
1	2	3	4	5

3b. Please give at least 3 specific examples of the service provided or work completed by students from this program.

4. In your opinion, what was the impact of the volunteer service/work provided by the students on your agency or on the clients served by your agency? *(e.g., for a tutoring/mentoring program, did you notice any changes in tutee/mentees' attitudes, behavior, skills or achievement?)*

5. In your opinion, how prepared were the students for the service or work they provided (e.g., ability to take on new challenges, ability to work in a group setting, etc.)?

Not at all prepared	Somewhat prepared	Prepared	Extremely prepared
1	2	3	4

6. How effective are students in this program in comparison to other service providers at your agency?

Less effective	As effective	More effective
1	2	3

7. How satisfied are you with your experience with students from this program?

<u>Not at all</u>   <u>Somewhat</u>   <u>Extremely</u>
<u>satisfied</u>   <u>satisfied</u>   <u>Satisfied</u>   <u>satisfied</u>
   1   2   3   4

8. Do the students give back enough to make the time you spend with them worthwhile? Please explain.

9. What problems, if any, did you encounter with the students (e.g., some students were too shy some students did not follow through, etc.).

10. What suggestions do you have for improving our program in the future?

THANK YOU FOR YOUR TIME!

Please return completed survey to:

_____

_____

Focus Groups

The purpose of the focus groups is to bring community partners together to discuss their service learning experiences and through this process, identify information on trends and common experiences that can be used to assess the impact on the community, the community-campus partnership, as well as potential areas for program improvement.

Preparation:

- Determine who will facilitate the focus groups. The facilitator should not be the program director or program faculty. It is important to get a facilitator who does not have a vested interest in the outcome of the focus groups in order to limit the chance of bias introduced into the responses as well as ensuring that the community partners will feel more comfortable discussing the program openly. The facilitator is responsible for asking the questions, maintaining a neutral stance, ensuring that all participants have an opportunity to voice their opinions, that a few individuals do not dominate the discussion, and keep to the allotted time schedule.

- Arrange for a room which will allow participants to be arranged in a circle to facilitate dialogue.

- Program Director and Faculty should not be present at the focus groups for the aforementioned reasons

- Assign community partners into groups of no more than 12 per group.

- Arrange for the sessions to be recorded

- Arrange for a note taker. The notetaker is responsible for operating recording equipment, changing tapes if necessary, and recording verbal and non-verbal communication.

Implementation:

- Arrange seats in a circle

- Introduce community partners to the purpose of the focus group and provide ground rules:

  o Thank them for participating

  o Introduction of facilitator and notetaker (define roles)

  o Goals for session

  o Session rules:

    ▪ Everyone's opinion is valid

    ▪ There are no right or wrong answers

    ▪ Please be truthful and candid when giving your responses

    ▪ Differing opinions are expected and welcome

    ▪ It is not necessary to come to consensus on any disagreements

    ▪ Be as brief and to the point with answers as possible

    ▪ Only one person can speak at a time so that no information is lost

    ▪ If you want to ensure anonymity, instruct the community partners to refrain from using their names or others names in the room

- Inform the community partners that the session is being tape recorded. However, only the person transcribing the discussion will listen to the tape and the transcribed document will not contain anyone's name to ensure confidentiality.

Possible Focus Group Questions:

1. Briefly describe your overall program and how the dental (hygiene) student was involved in this program.
2. What were your expectations for the service-learning program?
3. How did the actual service-learning experience compare to your expectations?
4. Do you feel that the students' service-learning activities added value to your program?
5. In what ways were the students activities a burden to your program?
6. What were the factors that were most influential in determining the success or failure of the students' experience?
7. Did the community that you serve benefit from the students' service-learning activites?
8. Do feel that you were an equal partner in planning, implementing and evaluating the service-learning program?
9. How has the service-learning program impacted the relationship between your organization and the college (university)?
10. What could we do to improve the program to better meet the needs of the communities?

Data Analysis: See Section on Qualitative Data Analysis

c. Faculty

To date, there has been little research regarding the role of faculty in service-learning. However, collecting data regarding this key stakeholder is essential in order to determine faculty perceptions of service-learning, to determine barriers and facilitators necessary for successful service-learning activities, and resources and career development opportunities necessary for implementation of successful service-learning courses.

Concepts:

- Attraction of faculty to service-learning (motivation)
- Professional development
- Impact on teaching
- Impact on scholarship
- Impact on professional life
- Commitment to community service
- Identification of Facilitators
- Identification of Barriers
- Satisfaction

Service-Learning Faculty Survey

Adapted from: Shinnamon, A (1999) Methods and Strategies for Assessing Service-Learning in the Health Professions

We would like to better understand the impact that service-learning has had on our faculty. The information collected in this survey is anonymous and will only be reported in aggregate.

I. First, we would like to know some information about you.

1. How long have you been teaching in dental education? _____

2. How many years have you been involved with teaching service-learning? _____

3. What is your age group?   Under 30 ☐   31-35 ☐   36-40 ☐   41-45 ☐   Over 45 ☐

4. What is your gender?   Male ☐   Female ☐

5. What is your racial background?   ☐ African American   ☐ Pacific Islander
                                     ☐ Caucasian/white   ☐ Native American
                                     ☐ Asian   ☐ Other _____

 Do you consider yourself to be Hispanic: Yes ☐   No ☐

II. We would like to gain your perspective about the service-learning courses you teach.
Please indicate your level of agreement with each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
6. Service-learning helps students to see how the subject matter they learn in the classroom can be applied in everyday life.	☐	☐	☐	☐	☐
7. Service-learning helps students to better understand their lectures and readings.	☐	☐	☐	☐	☐
8. I feel students would have learned more from my course(s) if more time had been spent in the classroom instead of doing community work.	☐	☐	☐	☐	☐
9. Service-learning should be implemented in more classes.	☐	☐	☐	☐	☐
11. Service-learning helps prepare dental professional students for their careers.	☐	☐	☐	☐	☐
12. Evaluation of the service-learning program(s) was (would be) useful to me.	☐	☐	☐	☐	☐

III. The next set of questions relates to your attitude toward community involvement.
Please indicate your level of agreement with each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
13. I value working with community partners to structure and deliver the service-learning experience for students.	☐	☐	☐	☐	☐
14. I learned something new about the community from my community partner(s).	☐	☐	☐	☐	☐
15. Faculty should be role models for students regarding community service.	☐	☐	☐	☐	☐
16. I was already volunteering in my community before we implemented service-learning.	☐	☐	☐	☐	☐
17. My participation in service-learning showed me how I can become more involved in my community.	☐	☐	☐	☐	☐
18. I feel service-learning benefited the community.	☐	☐	☐	☐	☐
19. Service-learning helped me to become more aware of the needs in my community.	☐	☐	☐	☐	☐
20. I have a responsibility to serve my community.	☐	☐	☐	☐	☐

IV. Next, we would like to know how service-learning influenced your professional development.
Please indicate your level of agreement with each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
21. Service-learning helped me to understand my professional strengths and weaknesses.	☐	☐	☐	☐	☐
22. Participating in service-learning helped me clarify areas of focus for my scholarship.	☐	☐	☐	☐	☐
23. Teaching service-learning courses has resulted in a change in my teaching style(s).	☐	☐	☐	☐	☐
24. Participation in service-learning is an important component of my professional portfolio.	☐	☐	☐	☐	☐

V. Next, we would like some of your personal reflections on your experience with service-learning.

Please indicate your level of agreement with each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
25. I was able to develop a good relationship with the students in my service-learning course(s) because of the community work.	☐	☐	☐	☐	☐
26. Through the service-learning experience, I became more comfortable working with people different than myself.	☐	☐	☐	☐	☐
27. Service-learning made me more aware of some of my own biases and prejudices.	☐	☐	☐	☐	☐
28. Participating in the community helped me enhance my leadership skills.	☐	☐	☐	☐	☐
29. The work we performed enhanced my ability to communicate my ideas in the community.	☐	☐	☐	☐	☐
30. I can make a difference in the community.	☐	☐	☐	☐	☐

VI. Finally, we have some questions about the process of teaching service-learning courses.

31. What was your reason(s) for deciding to teach a service-learning course?
Please indicate all reasons that apply and rank them in order of importance (1= most important, 2= next most important, etc.).

_____Want to try something new Professional recognition

_____Desire for increased relevance in courses Curiosity

_____Encouragement from colleagues Institutional mandate

_____Resources ($) to support the course Faculty incentive money

_____Other (please specify):

33. Based on my experience with service-learning in the HPSISN program, my most serious concern about teaching a
service-learning course is:
Please indicate all responses that apply and rank them in order of importance (1= most important, 2= next most important, etc.).

_____ Time constraints

_____ Unpredictable nature of community work

_____ Coordination of placements

_____ Assessment of students learning and work

_____ Supervision of students

_____ Human, fiscal & physical resource

_____ Communication with community partner(s)

_____ Reduced time for classroom instruction

_____ Distinguishing service-learning from clinical skill development

_____ Added burden for students who are already in a very intensive program

_____ Giving up control of the learning experience

_____ Faculty promotion & tenure policies

_____ Other (please specify):_____

34. Teaching a service-learning course has had a positive impact on the following:
Please indicate all responses that apply and rank them in order of importance (1= most important, 2= next most important, etc.).

_____ My research agenda

_____ My relationships with faculty colleagues

_____ My plans for publications and presentations

_____ My relationships with students

_____My relationships with community partners

_____Other classes I teach

_____My personal service in the community

_____My relationships with University administrators

_____My professional service in the community

_____Service to my profession

_____Other (please specify):

35. Please add any other comments you have about teaching service-learning courses. *(Please use the back of this paper or attach an additional sheet of paper.)*

Thank you for your insights regarding service-learning.
Please return the survey in the enclosed envelope by *date* to:

Focus Groups

The purpose of the focus groups is to bring faculty members who are engaged in service-learning together to discuss their experiences with the service-learning and through this process, identify information on trends and common experiences that can be used to assess the impact on the faculty as well as potential areas for program improvement.

Preparation:

- Determine who will facilitate the focus groups. The facilitator should not be the program director or program faculty. It is important to get a facilitator who does not have a vested interest in the outcome of the focus groups in order to limit the chance of bias introduced into the responses as well as ensuring that the students will feel more comfortable discussing the program openly. The facilitator is responsible for asking the questions, maintaining a neutral stance, ensuring that all participants have an opportunity to voice their opinions, that a few individuals do not dominate the discussion, and keep to the allotted time schedule.

- Arrange for a room which will allow participants to be arranged in a circle to facilitate dialogue.

- Assign faculty into groups of no more than 12 per group.

- Arrange for the sessions to be recorded

- Arrange for a note taker. The notetaker is responsible for operating recording equipment, changing tapes if necessary, and recording verbal and non-verbal communication.

Implementation:

- Arrange seats in a circle

- Introduce faculty to the purpose of the focus group and provide ground rules:

    o Thank them for participating

    o Introduction of facilitator and notetaker (define roles)

    o Goals for session

    o Session rules:

        - Everyone's opinion is valid

        - There are no right or wrong answers

        - Please be truthful and candid when giving your responses

        - Differing opinions are expected and welcome

        - It is not necessary to come to consensus on any disagreements

        - Be as brief and to the point with answers as possible

        - Only one person can speak at a time so that no information is lost

        - If you want to ensure anonymity, instruct the faculty to refrain from using their names or others names in the room

- Inform the faculty that the session is being tape recorded. However, only the person transcribing the discussion will listen to the tape and the transcribed document will not contain anyone's name to ensure confidentiality.

Possible Focus Group Questions:

1. Briefly describe your involvement in the service-learning program.
2. What were your expectations for the service-learning program?
3. How did the actual service-learning experience compare to your expectations?
4. Do you feel that the dental (hygiene) students' service-learning activities enhanced or impaired their educational experience?
5. Do you think that the service-learning experience was optimally linked to the academic portion of the curriculum?
6. What were the factors that were most influential in determining the success or failure of the dental (hygiene) students' experience?
7. Did the community benefit from the students' service-learning activities?
8. How did the community partners participate in the planning, implementing and evaluating the service-learning program?
11. How has the service-learning program impacted the relationship between the community and the college (university)?
12. Has your participation in service-learning activities had any impact on your life, either personally or professionally?
11. What could we do to improve the program to better meet the needs of the communities and students?

Data Analysis: See Section on Qualitative Data Analysis

d. Institution

Institutional commitment is an important factor in determining the long term success of service-learning programs. This is not surprising since the institution provides the context for the service-learning activities, the selection of students and faculty, and the relationships with the community. Given the importance of the institution, in all aspects of service-learning activities, it is essential to evaluate the impact of service learning on the institution as well as the institutional commitment to service-learning. The following concepts may be useful when developing your evaluation questions (Gelmon, 2001):

- Dental (hygiene) school mission
- University or medical center mission
- Academic culture
- Financial condition
- Institutional history, self-image, sense of peers
- Public image / reputation
- Student traits / goals
- Community conditions / needs / assets
- Infrastructure for service
- Faculty development programs
- Community involvement
- Campus policy and reward system
- Commitment to evaluation
- Curricular and co-curricular service activities
- Resource allocation choices
- Leadership across institutional levels
- Support for interdisciplinary work
- Communication strategies / dissemination

Proposed People to Interview:

- Dean

- Academic Affairs / Associate Dean of Predoctoral Curriculum

- Admissions Office

- Medical Center Provost

- Clinical Affairs

- Public Relations / Communications

- Student Services

- Community Health / Dental Public Health

- Alumni Office

- Evaluation Office

Interviews are particularly appropriate for college or university administrators when trying to assess the impact of service-learning on the institution. During this process, it may also be possible to assess the institution's commitment to service-learning and the underlying commitment to community-campus partnerships.

Interviews: The following were adapted from Patton (1990) and McNamara (1998)

Preparation:

1. Arrange for a setting with few distractions

2.   Define the purpose of the interview

3.   Indicate how long the interview will take

4.   Explain the format of the interview

5.   Ask if they have any questions before the interview starts

6.   Explain that the interview will be recorded

Question Sequence:

1. Get the respondent engaged as soon as possible.

2. Begin the interview by asking factual questions, then progress to controversial or personal
    questions.

3. Stagger fact based questions with more thought provoking questions to keep the
    respondent engaged.

4. Ask questions about the present before questions about the past or future.

5. The last question should allow respondents the opportunity to provide any additional
    information

Question Wording:

1. Questions should be open ended.

2. Questions should be neutral. Avoid using words or phrases that are leading. For
    example, describe the impact of service-learning activities is preferable to describe the
    success of your service learning programs

3. Questions should be worded clearly.

4. Be careful of "why" questions. These type of questions may evoke defensive responses
    and may cause the respondent to disengage in future questions?

Conducting the Interview:

1. Periodically ensure that the tape recorder is working

    2. Ask one question at a time.

    3. Remain neutral by avoiding showing any reaction to the respondents statements or
        actions.

    4.   Encourage responses by nods or other verbal or nonverbal cues

    5.   Provide Transition. For example, we've been talking about community-campus
        partnerships, now I'd like to move on to service-learning.

    6. Do not lose control of the interview.   Losing control can occur when the respondent
        goes off on a tangent, spends too much time responding to one question, or begins to
        ask questions of the interviewer.

Possible Questions:

Do you tell prospective students, staff and faculty about the school's community partnerships
and service-learning activities?

What is your understanding of the school's mission?

Do the community-campus partnerships or service-learning activities enhance the school's
mission?

How are the school's service-learning activities promoted within the university, the
community?

How are service-learning activities counted in the faculty promotion and tenure process?

Have the service-learning activities had any affect on the status of the school within the
university? Within the community?

Document Review

Possible Documents to Review:

- Records of gift giving
- Media coverage (newspaper articles, television, newsletters etc)
- Student awards
- Faculty awards
- Staff awards
- Student retention data
- Admissions data
- Alumni survey data
- Promotion and tenure guidelines
- Course schedules and catalogues
- Program descriptions
- Web pages
- Recruitment publications
- Annual reports
- Strategic planning and budget documents
- Publications for donors/alumni
- List of Board members

Document Review:

Before you begin analyzing the documents, you will need to determine which indicators you will be looking for and which documents are available and will likely provide the information you are trying to locate. When reviewing the documents, you should record each time service-learning or community-campus partnerships are highlighted.

Analysis:

Search for patterns in the indicators that were recorded from the documents. Compare the patterns to the finding that did not fit into the patterns. Write a brief narrative to describe the results. Compare the results to findings from other data collection methods.

e. Alumni

We hope that the impact of the service-learning activities continue long after the students graduate. Yet, few programs evaluate this outcome because of the logistic challenges that this approach brings. However, it is certainly possible to follow these individuals with the assistance of the school's alumni office. The simplest and most efficient way to collect information from this group is by survey.

Service-Learning Alumni Survey

Adapted from: Shinnamon, A et al (1999) Methods and Strategies for Assessing Service-Learning in the Health Professions

We would like to better understand the impact that service-learning has had on our alumni. We particularly want to know how these experiences have influenced your perspective on learning, your view of service, your choice of career/specialization and your perspectives on working in a diverse community. The information collected in this survey is anonymous and will only be reported in aggregate. Should you have nay questions regarding this survey, please contact _____

1.   First we would like to know some information about you.

1. What is your age group?   ☐ Under 27   ☐ 27- 32   ☐ 33-37 ☐ 38-42   ☐ Over 42

2. What is your gender?   ☐ Male   ☐ Female

3. What is your racial background?   ☐ African American   ☐Pacific Islander
                                                         ☐Caucasian/white   ☐ Native American
                                                         ☐ Asian   ☐Other _____

4. Do you consider yourself to be Hispanic: Yes ☐   No ☐

5. What year did you graduate? _____

6. In what type of agency did you complete your service-learning activities when you were a
     student? *(check all that apply)*

☐	Hospitals	☐	Prisons
☐	Community/Rural health centers	☐	Nursing Homes
☐	Mobile Dental Clinic	☐	Cultural Centers
☐	Assisted Living Centers	☐	HeadStart Centers
☐	Schools (Public or Private)	☐	Senior Centers
☐	Public Health Agencies	☐	Homeless Shelters
☐	Churches	☐	Other_____

7. How many hours per week did you spend on structured service-learning activities?
☐ 0 hrs/wk   ☐ 1-10 hrs/wk   ☐ 11-20 hrs/wk   ☐ 21-30hrs/wk   ☐ 31-40 hrs/wk

8. What community needs did you address in your service-learning activities?
 (check all that apply)

☐ AIDS/HIV	☐ Disability issues	☐ Elderly care
☐ Homelessness	☐ Mental health	☐ Substance abuse
☐ Domestic Violence	☐ Women's health	☐ Youth issues
☐ Diabetes	☐ Oral Health	☐ Tobacco
☐ Other(please specify):_____		

II. Next, we would like to gain your perspective about the service-learning course(s) in which you participated.

Please indicate your level of agreement with the following statements

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
9. The community participation aspect of the courses helped me to see how course material can be used in everyday life.	☐	☐	☐	☐	☐
10. Participation in service-learning helped me to better understand the material from my lectures and readings.	☐	☐	☐	☐	☐
11. I feel I would have learned more from the courses if more time was spent in the classroom instead of in the community.	☐	☐	☐	☐	☐
12. I would have benefited by having more service-learning courses when I was a student.	☐	☐	☐	☐	☐
13. My service-learning experience did not help me to build my clinical skills.	☐	☐	☐	☐	☐
14. Participation in service-learning made me more responsible for my own learning.	☐	☐	☐	☐	☐
15. Community service should be a voluntary activity rather than a course requirement.	☐	☐	☐	☐	☐
16. Service-learning made me more aware of the roles that dental professionals can have in the community.	☐	☐	☐	☐	☐
17. Service-learning made me more aware of the roles of health professionals in other disciplines besides my own.	☐	☐	☐	☐	☐

III. The next set of questions relates to your attitude toward community involvement.
Please indicate your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
18. I provided community service before I participated in service-learning in school.	☐	☐	☐	☐	☐
19. The community participation aspect of service-learning showed me how I can become more involved in my community.	☐	☐	☐	☐	☐

IV. Next, we would like to know the influence of your service-learning on your future professional work.
Please indicate your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
20. I have continued involvement with my service-learning site.	☐	☐	☐	☐	☐
21. I feel that the work I did through service learning benefited the community.	☐	☐	☐	☐	☐
22. I have not volunteered or done community service since graduation.	☐	☐	☐	☐	☐
23. Service-learning helped me to become more aware of the needs in the community.	☐	☐	☐	☐	☐
24. I have a responsibility to serve the community.	☐	☐	☐	☐	☐

V. Finally, we would like some personal reflections on your service-learning experience(s).
Please indicate your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
25. Doing work in the community helped me to define my personal strengths and weaknesses.	☐	☐	☐	☐	☐
26. Performing work in the community helped me clarify my career/specialization choice.	☐	☐	☐	☐	☐

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
27. I have integrated community service into my career .	☐	☐	☐	☐	☐
28. I developed more professional relationships because of my community work.	☐	☐	☐	☐	☐
29. Because of service-learning, I became more comfortable working with people different from myself.	☐	☐	☐	☐	☐
30. Service-learning made me more aware of some of my own biases and prejudices.	☐	☐	☐	☐	☐
31. Participating in the community helped me enhance my leadership skills.	☐	☐	☐	☐	☐
32. The work I performed in the community enhanced my ability to communicate my ideas in a real world context.	☐	☐	☐	☐	☐
33. I can make a difference in the community.	☐	☐	☐	☐	☐

34. Please add any other comments you have about your service-learning experience(s).
(*Please use the back of this paper or attach an additional sheet of paper.)*

Thank you for your insights regarding service-learning.

Please return this survey in the enclosed envelope by *date* **to:**