



PROGRAM ASSESSMENT: THE ULTIMATE DESIGN PROBLEM

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The process of program assessment of student learning can be understood in the context of the open-ended design problem. In designing a product or process for a client, several design principles are shared among disciplines. Here are some common characteristics of the design processes that can be applied to program assessment:

Understanding the clients' needs

When designing a product or process, it is important that the service provider understands the clients and meets their needs. In the program assessment planning process, the service provider must consider both the external clients, those who employ our graduates or accept them for graduate schools, as well as internal clients, our students and our faculty colleagues:

- What do graduates need to know or be able to do to succeed in the initial years after graduation and thereby satisfy our external clients' needs?
- What are the students' expectations of how their preparation will help them achieve their career goals?
- What about our faculty colleagues? How does the teaching in one course impact our colleagues who will be expecting students to have certain knowledge and skills when they take subsequent courses?

How do we know that we have met our clients' needs? These questions should drive the design of the educational process (anticipated student outcomes).

Identifying constraints

In the business world, clients do not come for services with unlimited expectations or resources. The client will expect the services to be provided within given constraints, such as product or process design specifications and financial constraints. No one program can do everything or meet the needs of every possible client. By understanding your program constraints, it is possible to manage the expectations of your internal and external clients.

For example, programs are constrained by the resources that are available to them, including the background and capability of students, the experience and composition of faculty, the quality and availability of laboratories and financial resources. There is a saying, "Price, service, quality — pick any two." When establishing the student outcomes, ensure they align with both the resources available and the processes that have been put in place to manage these resources. The outcomes must be realistic considering the program's existing constraints (which may include external requirements).

Teamwork

Most design problems are not solved by individuals working alone. Solutions are more often the result of collaborative efforts. Program assessment requires the same type of collaboration by program faculty. This is not to say that everyone is equally involved; rather, there must be an internal process that engages the faculty in a way that optimizes both the resources available and the likelihood that the outcome meets the clients' expectations. Someone needs to serve as the project manager and have responsibility for bringing together the necessary resources to develop a quality assurance process that continuously improves the curriculum.

Ambiguity

By their nature, most design problems are ambiguous in that there is no one clear solution. Based on the problem's complexity, the existing constraints and the available resources, there can be several possible solutions. The same is true for program assessment — there is no one way to develop a continuous quality improvement process for program curriculum. Numerous processes have been developed to solve the problem; the one that fits a program best is the one that meets its need, based on constraints and best practices. Programs can learn from one another to reduce time to delivery, but the bottom line is that a program must develop a process that fits its unique situation.

Iteration

Design processes are iterative; generally, models for a proposed solution are developed and then tested to see if they meet the necessary requirements. Data are taken and analyzed, processes are examined to see if they are valid and reliable and projections are made to determine if the final product or process can be delivered within budget. With each test, there are modifications and retesting. When doing program assessment, chances are unlikely that it will be optimal the first time. There will be cycles of refinement, not only to improve results but also to improve the process of quality improvement itself. Data collection tools will be polished, data collection cycles will be altered, and student outcomes will become more focused and better defined. Each step in the program assessment process will influence both previous and future steps, and every improvement in the process will optimize the final solution.

Integration

The design process is made up of multiple sequential yet integrated steps. Each step informs the other steps and there are generally no shortcuts without jeopardizing the quality of the results. The same is true for the program assessment process. Certain steps must be followed to ensure that the findings are valid and reliable and that the information provided can lead to quality improvement. It begins with the clients and their needs. Once the clients' needs are identified, it is the program faculty's responsibility to determine what the product (curriculum) should be to satisfy those needs. In determining how to do that, faculty must consider the given constraints and determine the measurable performance indicators (specifications) that must be met. With consideration for the performance indicators, practices and strategies must be developed so that students have ample opportunity to learn, develop, practice and get feedback on their performance, related to the indicators that have been established. Assessment data must be collected, analyzed and evaluated at the program level to determine whether the curriculum has met the desired results. If it has not, improvements must be made. The steps in this process are integrated so that, when assessment results are evaluated, they have clear implications for how the program can be improved. The ultimate goal is satisfaction for the clients, both internal and external.

ⁱ For the purpose of this article, the word "client" will be used synonymously with the word constituent or stakeholder to denote the entity who requests or will benefit from the product or process.