

Conducting Needs Assessments to Inform Instructional Design Practices and Decisions

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Higher Education

Instructional Designers

Needs Analysis

Needs Assessment

The purpose of a needs assessment is to determine the current state of performance and the desired state of performance. When conducting a needs assessment, it is important to gather sufficient data to understand the situation warranting instructional solutions. The purpose of this chapter is to provide guidance for instructional designers interested in conducting needs assessment practices on a variety of scales.

Introduction

Instructional designers can be assigned to projects at various stages. They may be assigned to work with a faculty member and provide support on an individual class activity or assist with transferring a face-to-face course to an online environment. Other times, they may be involved in a larger scale project that impact a number of courses being offered within an academic program or department.

Regardless of when instructional designers are integrated into a program, the focal point of their work never changes. The learner is the center of everything that they do. To address the needs of their learners and advocate for them accordingly, it is important to ensure that appropriate and sufficient information has been gathered that can inform their instructional design process. This can be accomplished through conducting a needs assessment.

Purpose of a Needs Assessment

The purpose of a needs assessment is to determine the current state of performance and the desired state of performance (Altschuld & Kumar, 2010). The difference between the current and desired states is where the need lies. While the process of conducting a needs assessment can be very cumbersome and time-consuming, many steps can be scalable to meet the demands of instructional design projects in higher education settings. The purpose of this chapter is to provide an overview of the process of needs assessment and resources to support instructional designers in gathering the necessary information they need to do their jobs.

When conducting a needs assessment, it is important to gather sufficient data to understand the situation warranting instructional solutions. While a needs assessment identifies an existing gap in performance (or an area for improvement), the purpose of needs analysis is to determine what is contributing to the gap in performance and/or problem being addressed. Understanding what factors are supporting or inhibiting a situation can help the instructional designer identify sustainable solutions that will hopefully eradicate the existing gap in performance.

Overview of Needs Assessment Process

Most needs assessments consist of five steps: identification of a problem, identification of data sources, data collection, data analysis, and recommendations. Each of these steps can be scaled to meet the size of a project an instructional designer in higher education may be working on, as well as the time limitations associated with those projects. Table 1 provides an overview of how an instructional designer may address each of these steps during a needs assessment as depicted by [Stefaniak \(2021\)](#).

Table 1.

Overview of Needs Assessment Process

Needs Assessment Step	Description
Identification of Problem	This step is typically completed in consult with a client (or the individual(s) requesting instructional design services). During this phase, the purpose of the needs assessment (the problem) is identified for the instructional designer to begin gathering data to address the gap in performance.
Identification of Data Sources	Once the problem to be explored has been identified, the instructional designer must identify data sources that will help them better understand the situation. The instructional designer must gather data that will help them explore the situation from multiple angles. Examples of data sources include, but are not limited to task analyses, direct observations, focus groups, interviews, document analysis, reviewing existing work products, and surveys.
Data Collection	This phase involves the instructional designer gathering data based on the data sources identified in the previous step.
Data Analysis	Once data collection is complete, the instructional designer begins to analyze all data to identify patterns and factors contributing to the problem identified at the beginning of the assessment. Depending on the findings from the data collection and analysis phases, the problem may be modified to be more consistent with the actual situation as depicted by the data.
Recommendations	Upon identifying patterns contributing to the problem, the instructional designer makes a list of recommendations to present to their client. These recommendations are typically prioritized according to the severity of need and level of urgency.

It is very rare that an instructional designer working in higher education will have the authority to make decisions for an entire design project. These projects often involve collaborating with faculty. Administrators and senior leadership may also be involved in large-scale projects involving the development of new programs or changes to organization infrastructure. Regardless of who may be involved in a project, it is important that every needs assessment project includes individuals who know about the issue, care about the issue, and can help implement any changes that occur as a result of the project (Cavanaugh & Chadwick, 2005).

Additional Resources

1. [Framing problems](#) (Svihla, 2020).
2. [Determining environmental and contextual needs](#) (Stefaniak, 2020).
3. [Guidebook for assessing needs](#) (Watkins et al., 2012).

Asking Questions

An overarching goal of any needs assessment is to identify performance gaps and opportunities for improvement. To make recommendations that can be sustained over an extended period of time, it is important that the instructional designer understands what is causing or contributing to the current state of affairs. By determining what factors are contributing to the current situation, the instructional designer can work with others involved in the project to design and implement solutions directly addressing any gaps in performance.

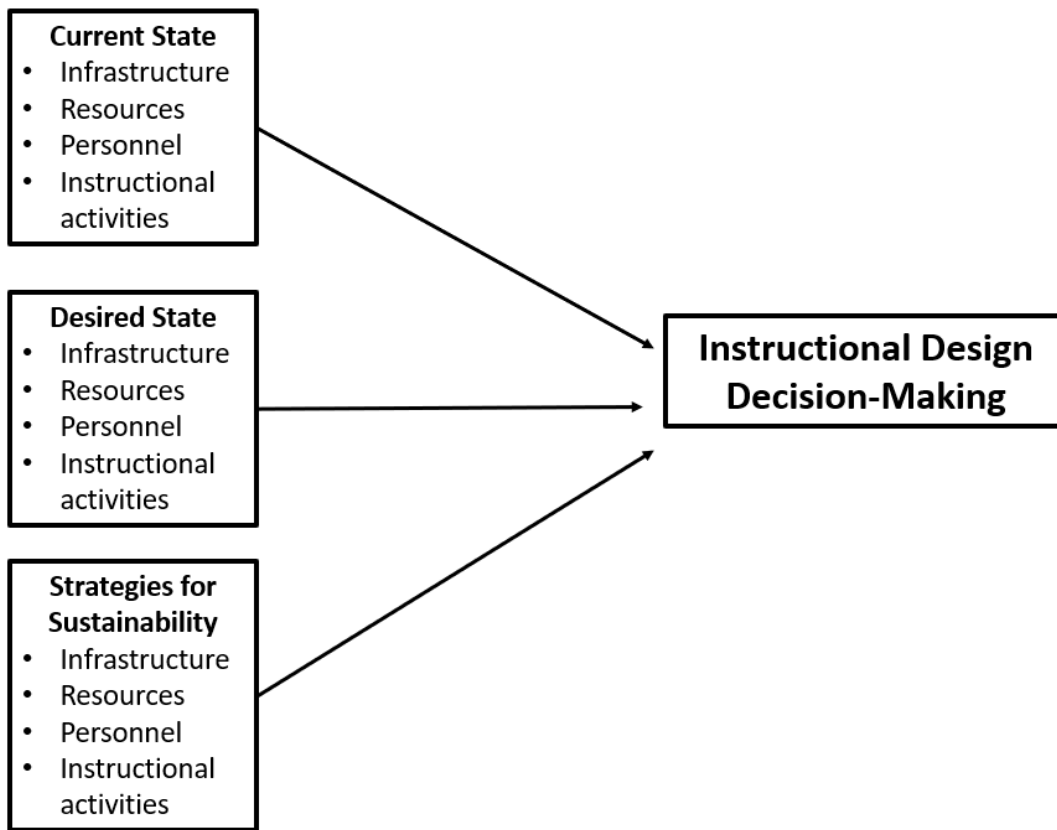
A common misconception that a lot of instructional designers have about needs assessments is that they take a long time to complete. While larger projects will most likely take weeks or months to complete, other needs assessments can be scaled to be completed quickly. There are lots of ways that needs assessments can be conducted rapidly in a matter of a few meetings or days depending on the project.

Conducting a learner analysis at the beginning of a semester is considered a needs assessment activity. Most of the time, instructional design activities that are presented with the ADDIE framework are limited to focusing on learner analyses (Stefaniak & Sentz, 2020). It is important that instructional designers expand beyond the learner analysis to better understand contextual factors impacting the organizational environment.

This can be accomplished by asking questions regarding resourcing, personnel, and plans for sustainability (see Figure 1). It is most beneficial to the instructional designer to ask as many questions as possible during a needs assessment to ascertain a detailed account of the environment. For purposes of needs assessments conducted in higher education, the environment could be considered the classroom, an academic program within a department, a department, a college, or the university as a whole.

Figure 1.

Factors influencing instructional design decisions



An image of current and desired state of affairs factors that influence instructional design decision-making.

Table 2 provides examples of the various types of questions an instructional design may want to consider asking while working on a needs assessment.

Table 2.

Examples of Questions to Ask During a Needs Assessment

Type of Project	Sample Questions
Designing a brand-new course	<ul style="list-style-type: none"> • What is the instructional delivery format (i.e., face-to-face, online, blended)? • What are the goals of the course? • What type of interaction and social presence does the instructor wish to have in the course? • What is the length of the course? • What aspects of the content will be most challenging for students?
Developing an online course based off a face-to-face course	<ul style="list-style-type: none"> • What are the goals of the course? • What aspects of the content are the most challenging for students in face-to-face classes? • What type of interaction and social presence exists in the face-to-face classes? • What type of interaction and social presence does the instructor wish to have in the online course?

Developing a new degree program

- What are the goals of the program?
- How will courses be delivered (i.e., face-to-face, online, blended)
- What type of interaction and social presence does the faculty wish to have in the program?
- How will courses be scaffolded to promote complexity?
- Are there certain types of learning experiences needed to provide students with an authentic experience?

When working as an instructional designer in higher education, it is important to gather enough information to inform what types of non-instructional solutions may be needed to support instructional efforts. Table 3 provides an overview of how an instructional designer may address each of these steps during a needs assessment as depicted by [Stefaniak \(2021\)](#). It provides a sample list of questions an instructional designer may consider when collecting information for projects warranting instructional solutions.

Table 3.

Example of Project Intake Form

INSTRUCTIONAL DESIGN PROJECT INTAKE FORM

Date:

Client:

Instructional Designer:

Project Name:

PROJECT OVERVIEW

1. What is the purpose of the project (instructional need)?
2. What is the scope of the project?
 1. Learning platform (Face-to-face, blended, online)
 2. Overarching course goal
 3. Learning objectives
3. What level of importance is the training? (i.e., severe, moderate, mild)

LEARNING AUDIENCE

1. Who is the intended learning audience?
2. What are the learners' experiences with the project topic?
3. What challenges do learners typically experience with this topic?
4. What are the learners' overall attitudes toward training?
5. What information will the instructional designer have access to regarding the learning audience? (i.e., job observations, meetings with learners, work products, interviews, etc.)

INSTRUCTIONAL ENVIRONMENT

1. How will the instruction be delivered?
2. How will learners access the material?
3. What is the length of the course?
4. What are the learners' roles during instruction?
5. What is the instructor's role during instruction?
6. What types of assessment need to be included in the instruction?

TRANSFER (APPLICATION CONTEXT)

1. How soon after the training will learners apply their newly acquired skills?
2. What are the anticipated challenges with applying these new skills in a real-world environment?
3. What resources are available to support learners during this transfer phase (i.e., job aids)?
4. Who is responsible for monitoring learners with transference?

EVALUATION

1. How and when will the instructional training be evaluated for effectiveness?
2. Who will be responsible for conducting an evaluation?
3. What methods of evaluation will be used to determine the efficiency and effectiveness of the instruction?

OTHER COMMENTS:

Determining Appropriate Data Sources

Once an instructional designer begins identifying questions that will help inform their team in designing appropriate solutions (instructional and non-instructional), it is important to gather data from multiple sources that inform the instructional designer of the current and desired state of affairs and help them approach their design work. Table 4 provides examples of data sources an instructional designer may consider when gathering information.

Table 4.

Data Sources an Instructional Designer May Gather During a Needs Assessment in Higher Education

Data Source	Examples
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Interviews	<ul style="list-style-type: none"> • Conduct individual interviews with instructors • Conduct individual interviews with students who can speak to how instruction is currently delivered • Conduct individual interviews with program leaders to discuss instructional support needed
Focus Groups	<ul style="list-style-type: none"> • Conduct a focus group with 6-8 instructors at a time • Conduct a focus group with 6-8 students at a time who can speak to how instruction is currently delivered • Conduct a focus group with a group of administrators (i.e., instructors, program leaders, department chairs, etc.) who can discuss instructional support needed
Surveys	<ul style="list-style-type: none"> • Email surveys to currently enrolled students to seek feedback on current courses and instructional practices
Document Analysis	<ul style="list-style-type: none"> • Review course syllabi • Review instructors' course sites in learning management system
Direct Observation	<ul style="list-style-type: none"> • Review videos of instructional meetings from online course activities • Observe face-to-face class sessions to gain an understanding of the instructional content and interactions

Suggested Tips When Conducting a Needs Assessment

Regardless of the project that an instructional designer may be assigned to in higher education, the following suggestions should be taken into consideration while planning:

1. **Identify appropriate people.** Be sure to identify individuals within your organization who are familiar with the project, care about the project, and have the ability and authority to implement any changes that may result from the needs assessment.
2. **Develop intake forms for projects.** A large majority of instructional design support units at higher education institutions require faculty who are requesting support to fill out a form providing an overview of the project. Intake forms help to ensure that everyone involved with the project has a shared understanding of what the project entails, timelines, and resources needed.
3. **Ask WHY!** When gathering data sources and asking questions, do not be afraid to ask WHY? When conducting a needs assessment, asking follow-up questions to help understand why a situation is occurring or what is causing a problem in the organization helps the instructional designer mitigate uncertainty.
4. **Align Needs Assessment Activities with Given Project Constraints.** Every project comes with constraints. It is okay to scale your needs assessment activities based upon the time constraints or resources associated with a project. A needs assessment that an instructional designer may conduct while assisting a faculty member with modifying an existing course will look much different in comparison to supporting a department who wishes to develop a new online degree program.

Books

The following is a list of books that may be of interest to instructional design professionals working in higher education who are interested in learning more about how to conduct needs assessments in higher education. Altschuld, J.W., & Kumar, D.D. (2010). *Needs assessment: An overview*. SAGE. Kaufman, R. & Guerra-Lopez, I. (2013). *Needs assessment for organizational success*. Alexandria, VA: ASTD Press. Stefaniak, J. (2021). *Needs assessment for learning and performance: Theory, process, and practice*. Routledge. Watkins, R., Meiers, M. W., & Visser, Y. L. (2012). *A guide to assessing needs: Essential tools for collecting information, making decisions, and achieving development results*. The World Bank.

Examples of Needs Assessments Conducted in Higher Education

Ali, N. S., Hodson-Carlton, K., Ryan, M., Flowers, J., Rose, M. A., & Wayda, V. (2005). Online education: Needs assessment for faculty development. *The Journal of Continuing Education in Nursing*, 36(1).

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Babcock, A., Lehan, T., & Hussey, H. D. (2019). Mind the gaps: An online learning center's needs assessment. *Learning Assistance Review*, 24(1), 27-58.

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Lewis, K. O., Baker, R. C., & Britigan, D. H. (2011). Current practices and needs assessment of instructors in an online masters degree in education for healthcare professionals: A first step to the development of quality standards. *Journal of Interactive Online Learning*, 10(1), 49-61.

Vafa, S., & Chico, D. E. (2013). A needs assessment for mobile technology use in medical education. *International Journal of Medical Education*, 4, 230-235. <https://doi.org/10.5116/ijme.5259.4a88>

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Svihla, V. (2020). Problem framing. In J.K. McDonald & R.E. West (Eds.), *Design for learning: principles, processes, and praxis*. EdTech Books. <https://edtechbooks.org/-VTiX>

Vafa, S., & Chico, D. E. (2013). A needs assessment for mobile technology use in medical education. *International Journal of Medical Education*, 4, 230-235. <https://doi.org/10.5116/ijme.5259.4a88>



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