

3.2 | Apply: Learner Analysis Scenarios

For the two scenarios that follow, read the reflection questions, then read the scenario, and finally, answer the reflection questions.

Scenario #1: Using Learner Analysis Data to Design Instruction on Internet Safety

Career Environment: K-12

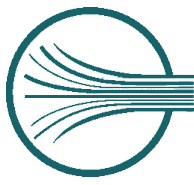
Read how individual differences impacted (or *should* have impacted) the design of instruction in the following scenario. How would you address this situation if you were the designer?

Superintendent Jason Keeps of Kettering Consolidated School District hired Penelope Smith to design a stand-alone, web-based unit on Internet safety. The target learners were elementary students in grades Kindergarten through 5th grade. The school technology specialist Karen Compton served as Penelope's subject matter expert (SME). Penelope was asked to pilot-test the unit prior to delivery, and to design it so that teachers could use the instruction in class or assign it as homework. Penelope and Karen identified the needs of the students and the specific content to cover, and then Penelope developed an online module that was ready to test two weeks prior to the delivery deadline. After Karen reviewed the module, several teachers and six students – one from each grade – tested the module. Penelope monitored the field tests, carefully observing and asking questions to identify problems. She made changes to the module and one week prior to the start of school, she delivered the final product to Superintendent Keeps. Keeps was thrilled and promised to demonstrate the module at the School Board meeting that very night. The next day, Penelope got a disappointing call from Superintendent Keeps: "Penelope, I'm afraid I have some bad news. Just after my demonstration of the module, board representative Scott Simon complained that the parents hadn't been consulted on the nature of the module, and he personally knew of several families without Internet access who wouldn't be able to use it at home. I was thinking that his concerns could be addressed by having teachers use the module in class, but then Amanda Grable asked whether the module design would enable the physically-challenged students in grades two and five to use the instruction. I'm afraid we're going to have to go back to the drawing board. Are you available to get together this week and revisit the design?"

Reflection Questions

What would you have done differently? Reflect on and discuss the following questions:

- What other stakeholders would you have consulted for the project, and how would you have involved those individuals or groups in the design process?
- What tasks and responsibilities related to learner analysis were addressed, and *should have been* addressed early in the process?
- Remembering the discussion on systems from Chapter 1, what systems impacted or should have impacted the design of the instructional module on Internet safety?
- What differing characteristics and needs were likely present in the learner population that were not considered in the design?



Scenario #2: How to Use Learner Analysis Data to Design Continuing Education

Career Environment: Health Care Environment

Watson and Belland (1985) describe an instructional design project in which learner data was used to determine the content of continuing education materials for Physician Assistants (PA). At the time of the design project, the authors stated that PAs typically entered the profession through a two-year post-secondary training program but often had widely varying backgrounds (previous military medic experience, other degrees, a variety of practice experiences, and/or other informal training experiences), that resulted in discrepancies in the general knowledge base. PAs were state certified, were to be supervised by licensed physicians, and had to pass a certifying exam every six years. The goal of the project was to “design and produce 18 self-paced learning modules that would assist the individual PA in remediating the deficiencies identified by [a] self-assessment examination” (p. 29).

To produce a profile of their target learner, the designers analyzed data about the learners’ prior knowledge, the patient issues they had seen in practice, and their own perceived needs. A nationally-administered Self-Assessment Examination, typically used to provide feedback to PAs on their professional strengths and weaknesses, provided information on body system knowledge, number and type of patients seen in practice, the PA’s perceived need for continuing education, and their professional role performance.

In the process of analyzing the data, the designers noted where test scores indicated that less than 70 percent of the sample population were competent (indicating a need for remediation), and where less than 50 percent were competent (indicating a severe need for remediation). They also looked at how critical each topic was to the profession, based on how many questions were devoted to it on the test, and according to the PA profession’s published declaration of their responsibilities for services (i.e., the professional organization’s “official” statement of the PA’s role in the health services field). Finally, they produced a matrix that assigned points to topics based on how critical the knowledge was to practice, how common the PA encountered the topic in practice, and the severity of need for remediation indicated by test scores. They then used these point values to prioritize the topics to be covered in the instructional modules. This project illustrates that, when sufficient learner data is available, it can provide “the instructional designer with precise criteria required to select content for instruction” (p. 33).

Reflection Questions

Reflect on and discuss the following questions:

- What available resources about the target learners and their needs did the designers use in their analysis? What additional information would you have collected?
- The original article about this case did not reveal whether the final instruction was evaluated to determine its success in teaching PAs what they needed to know. Based on what you know of the project, how close do you think the designers got to correctly identifying the learners’ needs and characteristics?
- Remembering the discussion on systems from Chapter 1, what systems impacted or should have impacted the design of the instructional module in this case?
- According to what you know of this case, what learner characteristics were not considered in the design?
- If you have access to, and have read the original article for this case, what additional thoughts do you have about the designers’ process?

Source Article: Watson, J.E., & Belland, J.C. (1985). Use of learner data in selecting the instructional content for continuing education. *Journal of Instructional Development*, 8(4), 29-33.