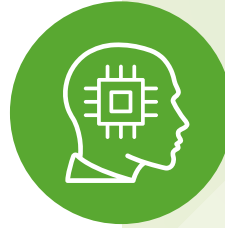


## Learning Science

# Instructional Design

How Best to Optimize the Learning Process



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### The Learning Science team

is pleased to share this summary information from our recent seminar “**Instructional Design: How Best to Optimize the Learning Process**” with our international educator community. We hope that by reading this material you will be inspired and better equipped to implement these helpful learning methods in your teaching practices.



Peter Horneffer, M.D.  
Director of Medical Education  
at Lecturio.com

### What is Instructional Design?

The systematic design of instruction entails all the steps to ensure the development of high-quality learning experiences, beginning from identifying the need for instruction and ending with the final stage of evaluating whether the desired learning occurred. Instructional design (ID) is systematic, where the pieces are interrelated, cohesive, and outcome-based to ensure the alignment of essential learning elements. Systematic instructional design considers every aspect of the teaching and learning process: examining goals, determining the learners’ needs and abilities, analyzing the environment for learning, reviewing the resources available, and defining the desired performance in order to develop the assessments, the instructional strategy, and the necessary materials.



## Data

### Where do the participants of the Instructional Design seminar come from?

**5.7%**

Europe

**16.2%**

South America & Caribbean

**18.1%**

Asia & Pacific

**5.7%**

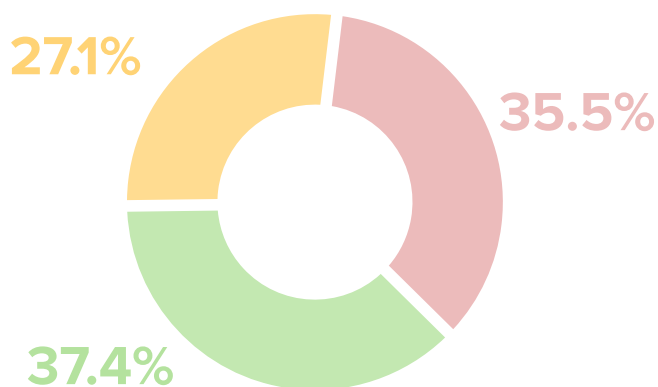
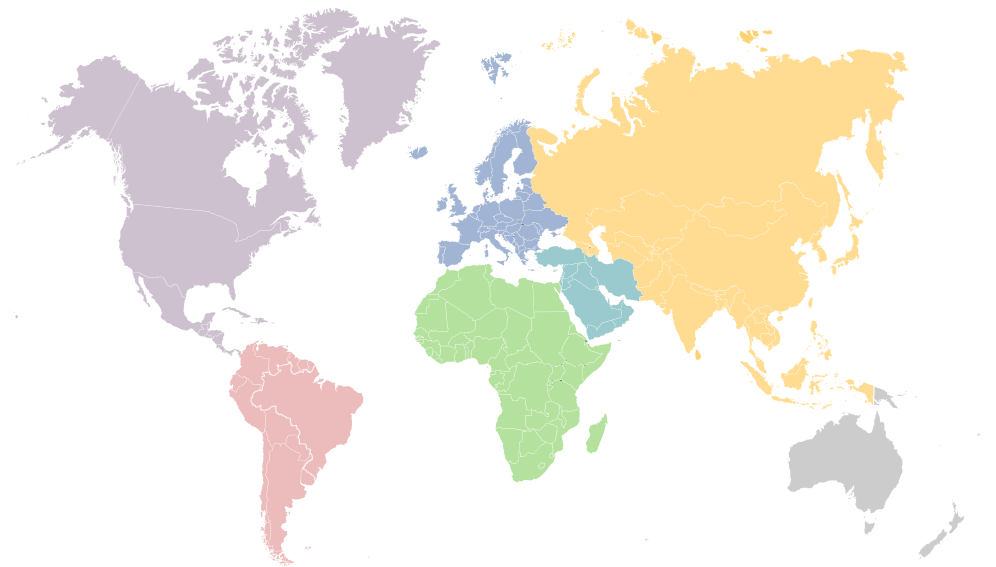
Africa

**49.5%**

North America

**4.8%**

Middle East



### How familiar are our participants with Instructional Design?

While many educators are familiar with aspects of instructional design, they may not be familiar with the systematic process as a whole. A majority of our participants (72.9%) reported some familiarity with instructional design prior to the start of the seminar but only 35.5% use it to prepare their courses.

- I am familiar with ID and I use it in all my course preparation and delivery.
- I am familiar with ID but I have not been able to use it.
- I am not familiar with ID and am not using it in my course preparation and delivery.

### How have our participants implemented Instructional Design in their educational practices?

A majority of participants (55.5%) currently use ID principles to ensure alignment within their courses. Far fewer (16.8%) have consulted with an instructional designer or educational specialist to help design or redesign courses. Some participants (8.4%) report using a systematic design process when designing courses and some (5.9%) also evaluate their courses using ID principles when determining the need for revisions.

**55.5%** I use ID principles to ensure alignment between objectives, materials, and assessments.

**16.8%** I consult with an instructional designer or ed specialist who helps me design and redesign courses.

**8.4%** I use a systematic design process when designing new courses.

**5.9%** I use ID principles when determining the need for changes to course(s).

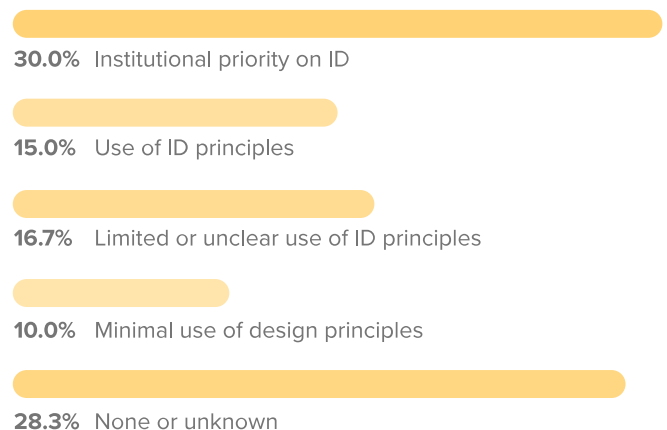
**13.4%** Other

## How is Instructional Design used in our participants' institutions?

Institutional use of ID and access to educational specialists who are versed in ID varies widely. The responses were grouped into four major categories:

- **Institutional Priority on ID:** curriculum and courses are designed at the institutional level, instructional design is required for new courses and major revisions, and instructional designers are available to all faculty.
- **Institutional use of ID principles:** faculty teams design courses and/or courses are based on alignment of objectives, materials, and assessments.
- **Limited or unclear institutional use of ID principles:** Respondents report course designs based on a single aspect such as a learning theory or instructional theory (e.g. problem-based learning). While ID processes and principles may be used in these cases, not enough information was given to discern the level of use.
- **Minimal institutional use of design principles:** most courses are based on materials being passed down, templates, or instructions; in some cases the syllabus is the only guiding factor.
- **None or unknown:** An educational specialist is not available, instructional design principles are not used to the respondent's knowledge, and/or respondents were unsure if ID was used.

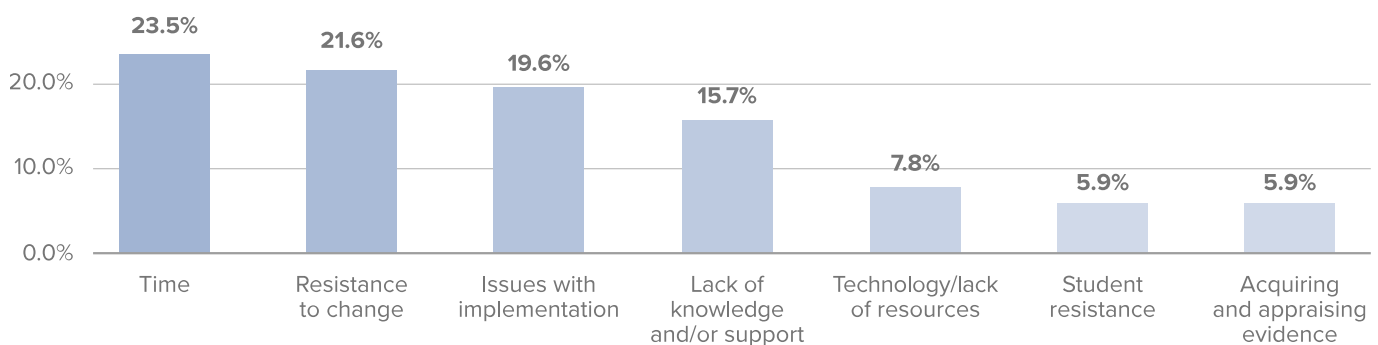
(Source: Survey)



## What challenges do you face in implementing Instructional Design in your courses?

ID can be challenging for faculty to implement without institutional support since most have not been formally trained in the process and access to educational specialists may be limited (see survey results above). Our participants shared their biggest barriers to implementing ID in their courses, departments, and/or institutions. The most commonly cited issues were time and resistance to

change. Some also reported issues with implementation, such as being able to perform all steps in the design process. Some reported a lack of knowledge and support, while others cited student resistance. Finally, some had difficulty finding high-quality or relevant research to inform their evidence-based designs.



## Resources

### Seminars

- [Online seminar library for health professions educators](#) ►
- [Educational webinars for health professions students](#) ►



[Lecturio platform demo request](#) ►

### Articles

- [Instructional Design: How Best to Optimize the Learning Process](#) ►
- [Metacognition: Do you really know what you think you know?](#) ►
- [Active Learning: Augmenting Student Engagement and Understanding](#) ►