

Implementing Instructional Design Approaches to Inform Your Online Teaching Strategies

[facultyfocus.com/articles/online-education/implementing-instructional-design-approaches-to-inform-your-online-teaching-strategies/](https://www.facultyfocus.com/articles/online-education/implementing-instructional-design-approaches-to-inform-your-online-teaching-strategies/)

September 16, 2020



The primary focus of any instruction should be to focus on the learning outcomes or capabilities you are trying to achieve. Bloom (1956, 1964) identified three types of learning outcomes: *cognitive* (knowledge), *affective* (attitudes, emotions, and values), and *psychomotor* (skills). For each outcome, instructors should also consider the level of outcome they are trying to achieve. So, if you are teaching cognitive skills, such as mathematics or language, you should determine if you need your students to *remember* (level 1), *understand* (level 2), *apply* (level 3), *analyze* (level 4), *evaluate* (level 5), or *create* (level 6) (Krathwohl, 2002). Once you have determined the level(s) of outcome, you should align your assignments to those levels. A multiple-choice exam can assess level 1 and possibly level 2 outcomes, but it will not assess students' abilities to apply, analyze, evaluate, or create. Consequently, you will need to devise more challenging assignments to elicit higher levels of performance from students, using essays, problem-based learning assignments, and case studies, for example.

Events of instruction

Another approach that can apply to online instruction is to employ Gagne’s nine events of instruction (Gagne et al., 2004) Depending on the learning outcomes you are trying to achieve and your target audience, you will need to arrange the events accordingly:

1. Gaining attention
2. Informing learners of the objectives
3. Stimulating recall of prior learning
4. Presenting the stimulus material
5. Providing learning guidance
6. Eliciting performance
7. Providing feedback
8. Assessing performance
9. Enhancing retention and transfer

Gaining attention

The first event typically involves gaining the attention of the audience—achieving this in an online course can be difficult as you don’t have a physical presence in the room, but appropriate use of technology can help. Once you gain your students’ attention, you also have to maintain their attention and motivate them for the duration of the course—this is where engaging activities become essential. Keller’s ARCS model of motivation (Attention, Relevance, Confidence, and Satisfaction) offers practical suggestions of strategies you can employ to design motivation into your course (Pappas, 2015).

Informing learners of the objectives

For every lesson and assignment, you should also state the objectives (event 2), indicating what learners will be expected to do, how, when, and where. Depending on the level of outcome you are trying to achieve, you should use appropriate action verbs to elicit the desired level from your students. Thinking back to your own experience as a learner, did you ever lose marks for not comparing and contrasting, because the instructor asked you to “describe” in the assignment brief? Fortunately, Bloom devised a taxonomy for each level, suggesting suitable action verbs for each level. If you need your students to analyze a historical event (level 4), you should use a verb like “analyze” in the assignment brief, rather than “describe” or “explain.” You should also avoid using verbs like “know” and “understand,” unless you’re going to tell learners *how* they will demonstrate that knowledge or understanding. In other words, by carefully considering the action verbs in your assignment briefs, you are more likely to elicit the desired performance from your students.

When writing objectives, Mager’s (1990) three characteristics of useful objectives can also prove helpful. As mentioned earlier, every objective should comprise an action verb, but you might also want to add a condition such as, “Given a list of...”, “Without the aid of a

calculator...,” or “Using primary sources...” to elicit a particular performance. You might also need to specify certain criteria, such as speed (...in five seconds), accuracy (...accurate to the nearest whole number), or quality (...speak fluent French). It is worth noting that the conditions and criteria you specify should be essential to the performance (e.g. don’t incorporate a speed criterion if it is not necessary).

Stimulating recall of prior learning

The third event encourages instructors to stimulate recall of prerequisites. Unfortunately, this event is often neglected in higher education, especially when classes comprise students with varied prerequisite knowledge. But even within a course, instructors can help their students by pointing them back to content covered earlier in the course. Using hyperlinks or even a simple, “Recall the week 4 lecture on topic X” can suffice.

Presenting the stimulus material

The fourth event, present the stimulus material, is where instructors officially start teaching. It is essential that the content uses the right tone for the target audience, is accessible, and caters to universal design. The content should also adhere to good practices of information design, in terms of typography (sans serif tends to be easier to read online), color (consider the subject matter and the cultural implications of your color choices), and formatting (e.g. use white space and chunking to separate paragraphs).

Providing learning guidance

The fifth event—provide learning guidance—is even more critical in online instruction, as students don’t have the luxury of problem-solving sessions with classmates over coffee. Using technology consistently, providing designated forums where students can ask questions, and setting clear guidelines about expectations (of students and instructors), are other forms of guidance.

Eliciting learner performance, providing feedback, and assessing performance

The remaining events occur after information acquisition. Instructors need to elicit learner performance (event 6), by providing students with regular opportunities to engage with the course material and with one another. The Sheffield Hallam University teaching approaches menu suggests technologies and assignments for different kinds of teaching approaches. Instructors also need to provide feedback on the learners’ performance (event 7) and formally assess the performance (event 8). As outlined earlier, instructors should use appropriate action verbs in their assignments and assessments to ensure students understand what is expected of them. Ideally, instructors should employ a mix of independent as well as collaborative assignments. One way to do this is to ask students to maintain personal reflective blogs describing their experiences of collaborative projects.

Enhancing retention and transfer

The final event—enhance retention and transfer— is sometimes neglected by instructors who are only focused on helping students meet course outcomes. Instructors need to find ways to link course content to real-world scenarios, as well as to other courses in the program.

Careful consideration of learning outcomes and the nine events can help instructors design courses that are pedagogically sound. Aligning assessments and activities with learning outcomes, and clearly communicating those outcomes to students in the form of objectives, will ensure students understand why they are being asked to undertake certain tasks and the standard of performance expected from them.

Darina M. Slattery, PhD, is a tenured faculty member and head of Technical Communication and Instructional Design at the University of Limerick (UL) in Ireland, where she teaches courses on e-learning, instructional design, and learning and collaboration technologies. She is an alumna of the Institute for Emerging Leadership in Online Learning (IELOL) and Vice President of the IEEE Professional Communication Society.

References

Abel, Scott (2007). Plain English is Good but Simplified English is Better: One Writer's View. The Content Wrangler.

https://thecontentwrangler.com/2007/05/07/plain_english_is_good_but_simplified_english_is_better_one_writers_view/

Ahead (2020). The UDL Framework Explained <https://www.ahead.ie/udl-framework>

Bloom, Benjamin S. (1956, 1964). Taxonomy of Educational Objectives: The Classification of Educational Goals. Book 1 (Cognitive Domain) & 2 (Affective Domain). Longman.

Gagné, Robert M., Wager, Walter W., Golas, Katherine C., and Keller, John M. (2004). Principles of Instructional Design. 5th edition. Wadsworth.

Krathwohl, David R. (2002). 'A Revision of Bloom's Taxonomy: An Overview', Theory into Practice, 41(4), pp. 212-218.

https://www.tandfonline.com/doi/abs/10.1207/s15430421tip4104_2

Mager, Robert F. (1990). Preparing Instructional Objectives. Revised 2nd Edition. Fearon Publishers, Inc.

Pappas, Christopher (2015). Instructional Design Models and Theories: Keller's ARCS Model of Motivation <https://elearningindustry.com/arcs-model-of-motivation>

Sheffield Hallam University (2014). Teaching Approaches Menu.

https://blogs.shu.ac.uk/shutel/files/2014/10/TeachingApproachesMenu_full_version07external.pdf

The Visual Communication Guy (2020). Information Design Rules

<https://thevisualcommunicationguy.com/information-design-basic-rules/>

World Wide Web Consortium (2020). How to Meet Web Content Accessibility Guidelines (WCAG) (Quick Reference) <https://www.w3.org/WAI/WCAG21/quickref/>