### Instructional Design

# Content Sequencing in Instructional Design

After you develop the objectives, it is time to decide on sequence for the instruction. Sequencing is defined as the efficient ordering of the content in order to improve the learners' understanding, and help them achieve the objectives (Morrison, Ross & Kemp, 2007). While some contents may be sequenced in several ways, some should be sequenced in one way for better presentation of the content. For example, when teaching someone how to write a research paper does not have an obvious sequence. It can be sequenced in several ways. On the other hand, before teaching how to calculate standard deviation, you need to teach some concepts (e.g. mean) first. Additionally, while some content requires learners to become an expert in a specific topic such as mathematics or accounting, others may require learners to be expert in a specific task such as managing a project, writing a conference paper, etc. The sequencing depends on the content that you teach.

In this handout, six different types of sequencing are presented below.

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_	Term	Definition	Example
	Concrete-Abstract Sequencing	It is a type of sequencing method requiring organization of the content from concrete and physical to abstract and symbolic.	Start with presenting geometric tangible objects (concrete), before teaching the rules or theorems about the geometric objects (abstract).
	Deductive Sequencing	It is a type of sequencing method requiring organization of the content from general to specific.	Teach the concept of database before teaching specific types of databases such as hierarchical, or relational.
	Easy-to-Difficult Sequencing	It is a type of sequencing method requiring organization of the content from easy to difficult.	Teach how to spell short words in language class before long words. Similarly, when teaching how to create a web page, start with HTML (easy), then continue with XML.
	Hierarchical Sequencing	It is a type of sequencing method requiring to teach simpler components skills of the content, before moving more complex skills.	Learners need to know how to add, before they can understand the concept of multiplication in math class. Similarly, learners must learn alphabet before ordering the words alphabetically.



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Term	Definition	Example
Procedural Sequencing	It requires teaching the first steps of a procedure in the sequence then helping the learners to complete remain steps.	Assume that you teach how to apply t-test in a specific research question. It includes step by step procedure such as stating hypothesis, deciding which type of t-test would be used, checking the assumptions, and running t-test in a statistics software.
Scaffolding	It includes a variety of the sequencing methods that reduces the support little by little, and increases the standard of performance gradually.	Assume that you teach how to swim to a child. In scaffolding method, you need to show how to stay on the water, and when she tries it, you need to support. Then, this support is decreased gradually. Finally, the child can swim by herself.

#### References

- Creating Learning Materials for Open and Distance Learning (2005). Retrieved December 6, 2016, from http://www.oerafrica.org/system/files/7824/creating-lerarning-materials-handbook-authors-and-instructionaldesigners.114f5f85-1baf-42dd-8e37-d195c2565255\_0.pdf?file=1&type=node&id=7824
- Doolittle, P. E. (2001). Instructional Design for Web-based Instruction. Retrieved from http://staff.washington.edu/rel2/geog100-UW/Archive/instructionalsequence.pdf
- Morrison, G. R., Ross, & Kemp, J. E. (2007). Designing Effective Instruction (5th Edition). Hoboken, NJ: John Wiley & Sons. ISBN13: 978-0-470-07426-8
- Reigeluth, C. M., & Keller, J. B. (2009). Understanding instruction. In C. M. Reigeluth & A. A. Carr-Chellman (Eds.), Instructional-design theories and models: Building a common knowledge base (pp. 27-39). New York, NY: Taylor & Francis.



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