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# Educational Design Services
## *Instructional Design*

Instructional design creates an effective learning experience centered on a topic or subject. Instructional design is less broad, more focused and more practice-based than Curriculum Design and is required for each of the multiple moving pieces that make up a curriculum. Instructional design place more emphasis on identifying the learning needs required to become proficient in a specific topic or subject. The major constituents of instructional design include

- identifying effective teaching and learning strategies,
- developing materials and approaches for knowledge transfer,
- assessment of learners
- evaluation of teaching and knowledge transfer effectiveness.

The process of instructional design is anchored in educational theory and psychology, including effective communication strategies between instructor and learners, as well as per-to-peer communication by instructors with each other and, separately, by learners with each other to facilitate knowledge transfer and development. Different but overlapping strategies are required, and used, in classrooms, online, or in workplace settings.

The basic elements of Instructional Design are:

**Systematic Approaches to Learning**:
Learning should be broken into sub-topics that are intentionally linked with a progression from basic or introductory material through intermediate levels and advanced knowledge integration and synthesis. Individual instructors are commonly responsible for their own subject/topic/class design. Professional Instructional designers may not be content experts, but they can be highly effective when working closely with individual instructors and others that are content experts. Together they produce a learning experience grounded in real-world knowledge and enhanced with theoretical approaches to knowledge transfer, learning and evaluation.

**Needs Analysis:**
Initially, the specific learning needs of the target audience and the goals they are required to achieve are identified. Then a set of sub-topics that progress from initial introductory material through intermediate and/or advanced level(s) are identified. These topics should be linked in some way – commonly a linear progression for more academic subjects, but

progression may be non-linear where multiple equally critical types of knowledge are required to be gained/imparted.

**Strategy and Material Development:**
At this stage, tasks and learning modalities are conceived. These tasks should aid knowledge transfer through varied strategies as appropriate for the content, learner's age and development, as well as the type of learning such as: online or in-person, taught vs. self-directed, time-limited or open ended and so on. Some experiences are traditional teaching or lecturing modules delivered with spoken and visual aids, others may involve kinetic and/or task-based learning such as producing content, role playing, written or visual media work, as well as development of communication or practical skills through delivering presentations, interacting with mystery shoppers and so on. These learning modalities should directly facilitate participants reaching the learning requirements identified by the person offering the subject, training or course.

During the process of instructional design instructional methods such as lecture, presentations, simulations, or games/role playing are identified. Independent instructional designers will meet and communicate with the content experts that are often the person who will deliver for the material. In this manner, the information learned and the way it is learned will be technically correct and error-free, and the instructor will be able to tailor the module or subject to their own strengths and preferences. This type of collaboration produces more effective learning and generally more satisfied teachers and learners. Once instructional methods are identified, the actual learning materials such as online or in-person modules, videos, workbooks, creative process development (e.g. building models, practice coding tasks *etc.*) can be developed for use with learning cohorts.

Instructional Designers increasingly leverage technological approaches including learning management systems and multimedia tools to enhance learning experiences. These are particularly relevant with remote learning, particularly for professional development, continuing education and adult learners.

Experienced Instructional Designers draw on a wide range of past knowledge including theoretical knowledge and practical experience so that design is both theoretically sound, as well as practically proven. Learning theory such as cognitive psychology and adult learning principles underpin the broad approach to instructional design and guide the design process, however; beware Instructional Designers that provide wholly theoretical advice and cannot demonstrate concrete experience from their own prior teaching and learning.

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**Evaluation:**
The process of Instructional Design includes evaluating the effectiveness of learning from multiple angles. Usually, there is a need to determine how well or how completely the participants have assimilated and can use their knowledge. This may involve testing, development of materials by learners (portfolios, written work, digital content etc), mock presentations given by learners to demonstrate knowledge, and so on. Feedback can be formative (feedback that assists to improve the learner's performance) or summative (mark or grade-based) or both.

The type of evaluation should match with the program – is summative (testing/grade based) evaluation required and/or desired, or will formative (feedback for improvement) evaluation be sufficient.

1. If learners are expected to have competency-based outcome – i.e. they must demonstrate they can use the subject matter appropriately with respect to their ongoing roles and responsibilities (e.g. problem solving, project design, *etc*). Then evaluations should be authentic, and as far as possible reflect real-world situations. These evaluations tend to involve a mixture of theoretical and practical assessments with both formative and summative feedback.
2. Alternatively, some curriculums aim for skills- or content-based outcomes, where learners demonstrate a minimum (or more) amount of content has been learned. These evaluations tend towards traditional 'test' based evaluations more directly focused on summative (grade or percentage-based) feedback.

There should be periodical evaluation of the instructor or instructors to ensure that content and delivery remain up-to-date and well-executed. Learners may be asked to provide formative feedback of the instructor (usually before any type of evaluation by the instructor so as not to bias the learner's feedback) regarding their experience of the learning environment. Peer evaluation (i.e. one instructor evaluates another, or a learning specialist evaluates the instructor) can be more valuable for professional development of the instructor.

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