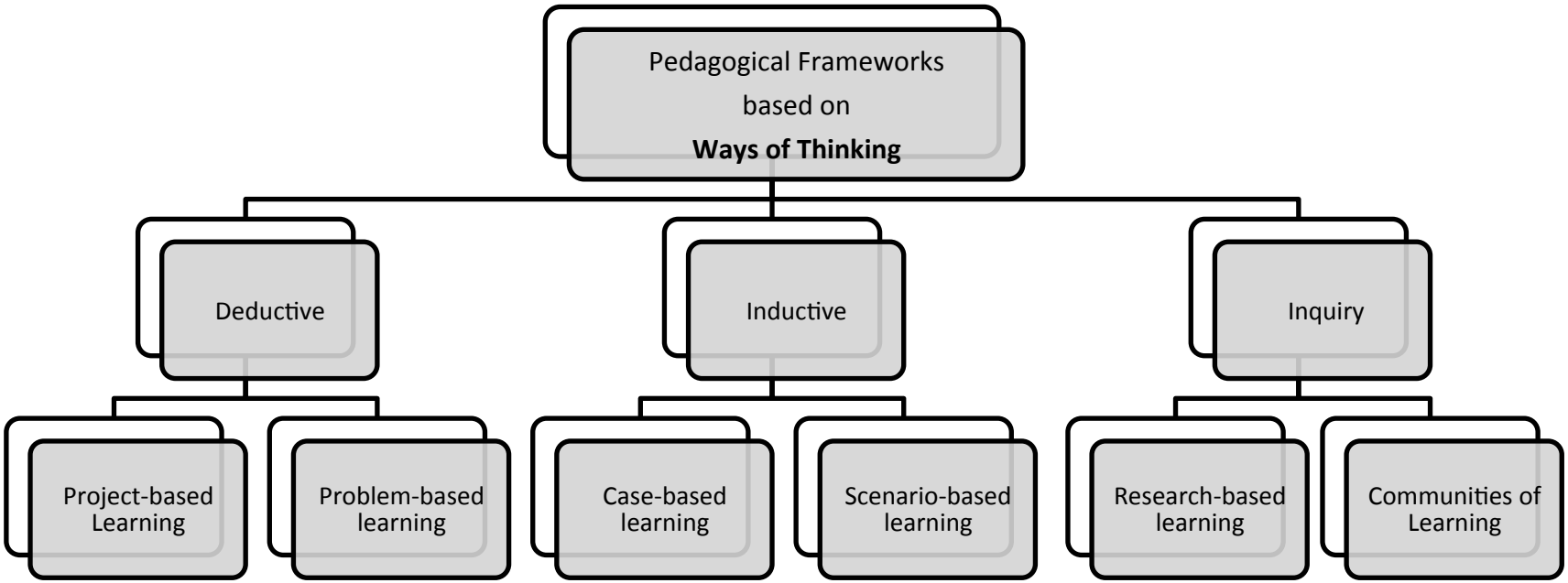
Pedagogical Frameworks

The following are traditional pedagogical frameworks used in face-to-face courses. Such approaches are often used to frame the design of an entire course. This macro approach to course design assists in making instructional design decisions when the structure is pre-determined.

Some pedagogical Frameworks are derrived from ways of thinking: inductive (from specific instances to general conclusions); pattern finding that results in conclusions); deductive (from general conclusions to specific examples); and inquiry (examing situation and identifying cause, correlations).



Project-based Learning – A long term instructional activity in which students work as a group as they focus on a question, problem, event or interest, investigate and negotiate understanding, and produce a product that represents their understanding (Brown & Campione, 1994).

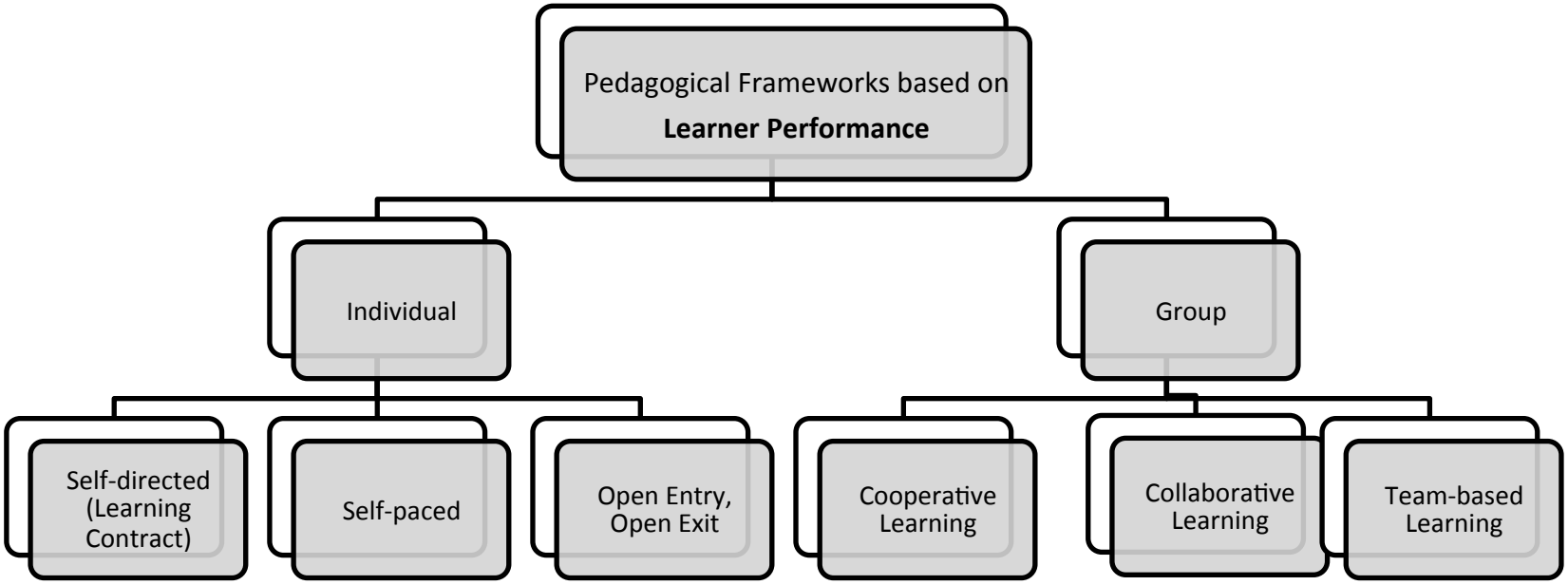
Problem-based Learning – Originally defined as both a process and a curriculum, PBL focuses on a specific real or imaginary ill-structured problems within an authentic real world context, whereas questions often originate from the learner as they seek a specific solution. Students work collaboratively and instructor serves as a guide, thereby preparing from problems that will be encountered in the field (Barrows & Kelson, 1993). a dilemma that must be solved is presented and learners seek solutions

Case-based Learning – Well-bounded cases are presented to students as a focus for discussion and analysis. one situation or case that becomes the focal point for an instructional sequence), Cases . can illustrate a real world situation that requires application of learned course content. Cases can be provided in segments, as learners become prepared to address different components of the case.

Scenario-based Learning - small situations provide examples and challenges illustrating the real world. Spiker (in press) suggests that scenario-based trainings (SBT) are effective because they provide small chunks of information that are typically action-based, accessible to the learner, can provide contextually relevant lessons to the learner, and are most effective when highly structured

Research-based Learning – learners are asked to pose a question or hypothesis that can be answered through research.

Communities of Learning - "… groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly." (Wenger, n.d.)



Self-directed Learning – "… any study form in which individuals have primary responsibility for planning, implementing, and even evaluating the effort. Most people, when asked, will proclaim a preference for assuming such responsibility whenever possible (Hiemstra, 1994).

Self-paced Learning – learning that is individualized for a single learner who proceeds through a set of learning experiences at his or her own pace.

Open Entry, Open Exit - Provides for flexible time, multiple ways to complete assignments, controlled assessment, typically no required attendance, variable credit, and is considered a form of "Correspondence" delivery.

Cooperative Learning – individuals work together where each person contributed a piece of the whole' requires interdependence to achieve a goal.

Collaborative Learning - individuals work independently to contribute to a goal.

Team Based Learning – Involves ongoing, incentive-based and individually accountable activities and assignments that are authentic and relevant to the learner.

References

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Pedagogy + Instructional Strategy

Teaching Content	Instructional Focus	Possible Instructional Application	Possible Assessment Application	How technology can help
Declarative knowledge – facts; anything that has to be memorized	Memorization	• Games • Drill & Practice • Pre-post testing	Presentation Test/Quiz	Limits distraction from learning task; improves retention, addresses multiple learning preferences
Intellectual Skills				
Concept knowledge – categories of things that have attributes making them alike	Providing examples and non-examples, identify attributes	• Concept Mapping • Video • Images • Narrative writing	Presentation Representation Test/Quiz	Illustrations can be generated by learner, concrete, supports transfer
Principle Knowledge – rules, laws, generalizations, axioms, etc.	Illustrations in different contexts, generalize to many instances	• Simulations • Games • Diagramming • Model building • Problem-solving	Illustration Depiction Model Test	Rehearsal, experiential learning, trial and error
Procedure Knowledge – steps that follow an action towards a pre-determined end.	Provide steps, re-order, practice, order	• Video • Images • Flow charting • Demonstration • Scaffolding/modeling	Illustration Depiction Model Test	Observation, rehearsal, trial and error
Problem Solving – Using Existing knowledge and skills to solve an unfamiliar problem	Presentation or introduction of the problem, analysis of problem, means-end or difference reduction	• Simulations • Dioramas • Presentation • Debate • Product	Document Narrate Create	Observation, rehearsal, experiential learning, trial and error, feedback, documentation of processes
Interpersonal Skills				
Collaboration - individuals work independently to contribute to a goal	Assign tasks, accountability, clear procedure, strategy for oversight of parts as relate to the whole	• Product (digital or print) • Presentation	Self-Assessment Peer-Assessment Rubric	Distributed intelligence, feedback, peer review, documentation of processes
Cooperation – requires interdependence to achieve a goal	Assign roles, accountability, clear procedure	• Product (digital or print) Presentation	Self-Assessment Peer-Assessment Rubric	Distributed intelligence, feedback, peer review, documentation of processes

Examples of Technology Applications + Bloom's Taxonomy, Revised

Instructional Focus	Knowledge Dimension	Cognitive Process Dimension					
		Remember	Understand	Apply	Analyze	Evaluate	Create
Memorization	**Factual Knowledge**	Clickers- Fill in the blank Quiz	Slideshow	Games	Games	Simulation	Simulation Animation
Providing examples and non-examples, identify attributes	**Conceptual Knowledge**	Clickers- Matching Quiz	Bookmarking Slideshow Concept Mapping	Presentation Animation	Concept Mapping Visualization	Bookmarking	Simulation Animation
Illustrations in different contexts, generalize to many instances	**Principle Knowledge**	Clickers- Multiple choice Quiz	Podcast Slideshow	Games Mashups	Concept Map Polling/Surveying	Bookmarking	Animation Podcast
Provide steps, re-order, practice, order	**Procedural Knowledge**	Clickers- - Ordering Quiz	Concept Mapping	Games Simulations	Concept Mapping Visualization	Video	Video Vlogging
Presentation or introduction of the problem, analysis of problem, means-end or difference reduction	**Problem Solving**	Polling/ Surveying	Concept Mapping Video Presentation	Games Simulation	Polling/Surveying	Video Bookmarking	Vlogging Publication Presentation
Assign tasks, accountability, clear procedure, strategy for oversight of parts as relate to the whole	**Collaboration**	Blog Wiki RSS	Wiki Concept Mapping Discussion	Virtual Worlds VCOP	VCOP Concept Mapping	Blog VCOP Wiki	Publication Presentation
Assign roles, accountability, clear procedure	**Cooperation**	Blog Wiki RSS	Wiki Discussion	Virtual Worlds	VCOP	Blog VCOP Wiki	Publication Presentation