

# Explicit Pedagogy

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# Teaching, Teaching Skills, Teaching Genius

- Is online teaching a Science (research-informed theory-oriented) or an Art/Craft (intuitive/individualistic skills based)?
- Are online teaching skills transferable from person to person or person to machine? Is this something we want to promote?
- Can anyone become an online teaching genius? What are the traits of an online teaching genius? Are there tools typically used by an online teaching genius? Can these tools be replicated in a computational environment for effective use by others?

# Teaching and Learning

- Is learning the central focus of education, if not teaching? How to navigate :: learning, un-learning, re-learning, pre-learning, co-learning, no-learning, rote-learning, insightful-learning :: ?
- Will teaching become inconsequential when it only involves content and pedagogy that are not burdensomely and explicitly meaningful to learners?
- Will teaching become inconsequential when it does not help students acquire learning skills to become intentional, independent, and self-directed students, to acquire, retain, and retrieve new knowledge on their own?

# Regulated Learning

- Students learn new higher-order knowledge by applying learning skills at convenient pace, breadth, depth and perturbation, among others. Does this imply that learning should be personalized? Could “regulated learning” stop teaching from becoming inconsequential? Could regulated learning become an integral part of teaching strategy?

Will regulated learning fail when encountered with ineffective instruction, irrelevant study material, inadequate measurements of learners’ capacity to learn, and interference in learning processes (cultural, personal, social, economical, ...)? Should pedagogy take effective, irrelevant, inadequate and interferences into account?

# Pedagogy

- Pedagogy is about formulating and adaptively deploying a theory of effectiveness of learning in a given context.
- Mark Smith (<http://infed.org/mobi/what-is-pedagogy/>) treats pedagogy as:
  - *Animation* – bringing ‘life’ into situations. This is often achieved through offering new experiences.
  - *Reflection* – creating moments and spaces to explore lived experience.
  - *Action* – working with people so that they are able to make changes in their lives.
- The theory and practice of education - wikipedia
- Can pedagogy be applied across ages, maturity (aka, learning efficiency), capacity? Pedagogy vs. Andragogy?

# Pedagogical Strategies/Methods/Techniques

[http://asianvu.com/bk/framework/?page\\_id=171](http://asianvu.com/bk/framework/?page_id=171)

## **Content Analysis**

- Content Stability Analysis: Stable and Dynamic Contents
- Content Suitability Analysis: E-learning,
- Face-to-Face and Blended Learning

## **Audience Analysis**

- Demographic Information
- Knowledge and Skills Information
- Learning Preferences
- Learning Styles
- Attitudinal and Motivational Information

## **Goal Analysis**

- Goals and Objectives
- Medium Analysis
- Delivery Medium: Internet, CD-ROM, DVD,
- Print-Based Materials, Face-to-Face Classroom

## **Design Approach**

- Instructivist Philosophy
- Constructive Philosophy
- Control of Learning
- Organization
- Sequencing Strategies

## **Methods and Strategies**

- Presentation
- Demo
- Drill and Practice
- Tutorials
- Games
- Story Telling
- Simulations
- Role-Playing
- Discussion
- Interaction
- Modeling
- Facilitation
- Collaboration
- Debate
- Field Trips
- Apprenticeship
- Case Studies
- Generative

# Is Pedagogy?

- Is pedagogy a combination of traits, features, and functionalities from the aforementioned table?
- How to measure the effectiveness of pedagogy?

# Yesteryears Pedagogy

- Over the last three decades, pedagogy has undergone a gradual transition from being fully implicit to being modestly explicit as instruction moved from classrooms to online.
- In early years, pedagogy is mostly implicit in how the content was presented to learners. Learners could not question the system or the designers about the sequencing of instruction.
- Later, these systems evolved to explicitly embed building blocks of content (e.g., text, pictures, and audio) using diverse media. The reason behind the presentation order of the building blocks and the types of interactions the blocks supported were made explicit, while still keeping the pedagogical strategies tantalizingly hidden.

# Contemporary Pedagogy

- Contemporary systems only offer veiled references to pedagogical attributes such as the context of instruction, target learner traits, learning goals and principles, instructional methods, and study session constraints.
- Failures of contemporary pedagogy
  - Study effectiveness cannot be directly or formally attributed to pedagogy.
  - Pedagogy cannot be easily personalized.
- Successes of contemporary pedagogy
  - Being implicit or semi-explicit, instruction designers can encode common practices that are found to be effective into [content+pedagogy] blocks.

# Explicit Pedagogy

- Those partially-transparent pedagogical underpinnings can be made formally and computationally explicit.
- Explicit representing of relations among pedagogical attributes would offer a formal network-like pedagogical instance, which will allow one to question not only the value and relevance of the instance but also validate the internal structure of the instance.
- Having such an explicit structure in a standardized and extendable computational form would allow the extraction of pedagogical insights as and when the corresponding instances are used in learning analytics systems.

# Why Explicit Pedagogy?

- Learning outcomes are fine; but pedagogy outcomes are better.
- Teaching online become more sciency, than artsie/crafty.
- Teaching skills are readily transferable, to a person or to a machine.
- Tools used can be personalized and adopted from other uses.
- Navigation of learning becomes a norm.
- Unburdensome content and teaching can be readily identified.
- Can target intentional, independent, and self-directed students.
- Can produce regulating learners since pedagogy will take effective, irrelevant, inadequate and interferences into account.

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