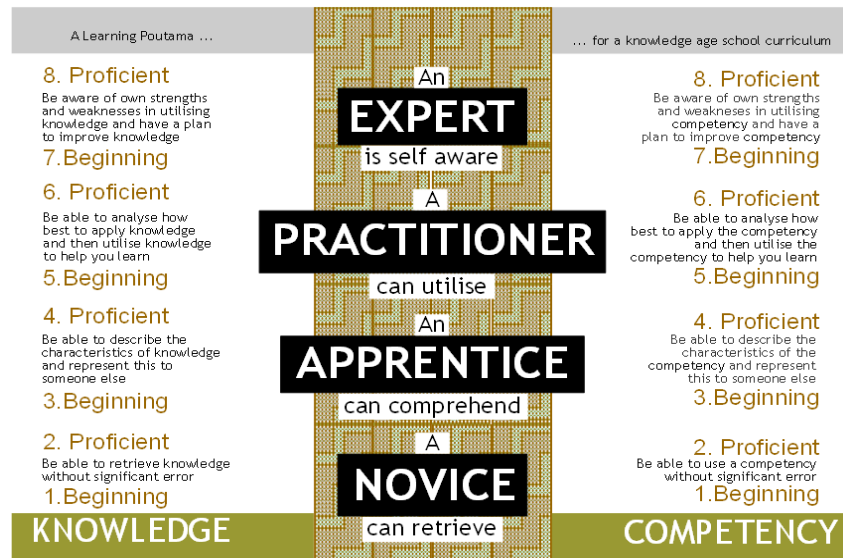


STAGES OF LEARNING IN A KNOWLEDGE AGE SCHOOL CURRICULUM

Stages of learning based upon a synthesis of the work of Dreyfus, Costa, Edwards Bloom (etal), Anderson and Marzano



Criteria used to judge the stage of learning a student is at in relation to knowledge at any given achievement level
(referenced to AOs from N2 curriculum)



Criteria used to judge the stage of learning a student is at in relation to competency at any given achievement level
(referenced to achievement profiles for competency from school curriculum)

STAGES OF LEARNING REFERENCE MATERIAL

Dreyfus + Dreyfus Model

The Dreyfus model states that all learning follows the following stages:

Novice

- Little or no previous experience
- Doesn't want to learn: wants to accomplish a goal
- No discretionary judgement
- Rigid adherence to rules

Beginner

- Starts trying tasks on their own
- Has difficulty troubleshooting
- Wants information fast
- Can place some advice in context required
- Uses guidelines, but without holistic understanding

Competent

- Develops conceptual models
- Troubleshoots on their own
- Seeks out expert advice
- Sees actions at least partially in terms of long-term plans and goals

Proficient

- Guided by maxims applied to the current situation
- Sees situations holistically
- Will self-correct based on previous performance
- Learns from the experience of others
- Frustrated by oversimplified information

Expert

- No longer relies on rules, guidelines, or maxims
- Works primarily from intuition
- Analytic approaches only used in novel situations or when problems occur
- When forced to follow set rules, performance is degraded

Art Costa Model

Novice:

- Limited awareness of the problem
- Reluctant to engage in the task
- Attempts task without strategy for how to begin
- Random or vague organization of the problem.

Apprentice:

- Attempts to use strategies although may not use them appropriately
- Is unconcerned about accuracy
- Describes Random or unclear explanation of strategy

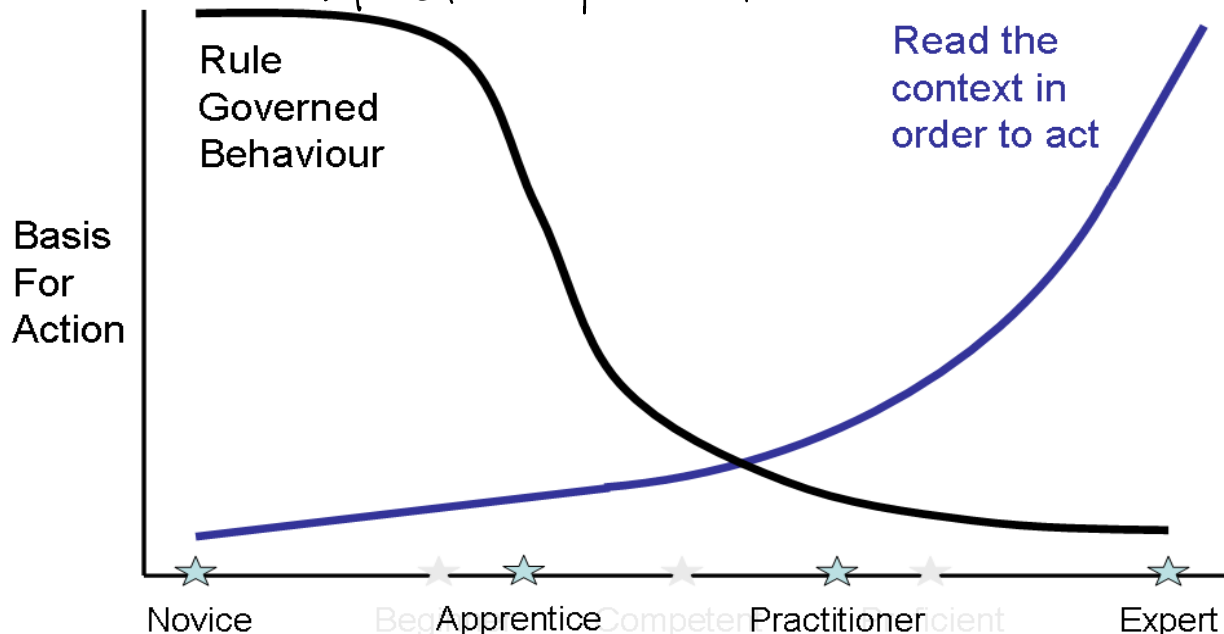
Practitioner:

- Shows a clear understanding of problem
- Able to perform task
- Perceives solutions from ego-centered perspective
- Persists in solving problem but is not always concerned about accuracy
- Is bound by rules of problem solving
- Describes strategies

Expert:

- Operates at a metacognitive level—is able to describe strategies and processes and explain why those strategies are used.
- Expresses efficacy and confidence of own abilities
- Spontaneously employs the Habits of Mind
- Draws forth from and employs a repertoire of strategies
- Can teach it to others.
- Generates new and divergent ways to solve problems and employ problem solving strategies
- Generalizes from previous experiences
- Experiments successfully to create multiple solutions
- Elaborates on process or strategy used.

John
Edwards interpretation of Dreyfus adapted
 by Stanley to use Costa's scale



Bloom's Taxonomy

A system of categories of learning behaviour to assist in the design and assessment of educational learning

Bloom's domains

Cognitive domain (intellectual capability, ie., knowledge, or 'think')

Affective domain (feelings, emotions and behaviour, ie., attitude, or 'feel')

Psychomotor domain (manual and physical skills, ie., skills, or 'do')

Bloom's original taxonomy

Cognitive knowledge	Affective attitude	Psychomotor skills
1. Recall data	1. Receive (awareness)	1. Imitation (copy)
2. Understand	2. Respond (react)	2. Manipulation (follow instructions)
3. Apply (use)	3. Value (understand and act)	3. Develop Precision
4. Analyse (structure/elements)	4. Organise personal value system	4. Articulation (combine, integrate related skills)
5. Synthesize (create/build)	5. Internalize value system (adopt behaviour)	5. Naturalization (automate, become expert)
6. Evaluate (assess, judge in relational terms)		

Lorin Anderson (2001)

BLOOM'S REVISED TAXONOMY

Creating

Generating new ideas, products, or ways of viewing things

Designing, constructing, planning, producing, inventing.

Evaluating

Justifying a decision or course of action

Checking, hypothesising, critiquing, experimenting, judging

Analysing

Breaking information into parts to explore understandings and relationships

Comparing, organising, deconstructing, interrogating, finding

Applying

Using information in another familiar situation

Implementing, carrying out, using, executing

Understanding

Explaining ideas or concepts

Interpreting, summarising, paraphrasing, classifying, explaining

Remembering

Recalling information

Recognising, listing, describing, retrieving, naming, finding

Marzano's Revision of Blooms (2001)

① RETRIVAL

Recall
Execution

② COMPREHENSION

Synthesis
Representation

③ ANALYSIS

matching, Classifying
Error Analysis
Generalizing, Specifying

④ UTILIZATION

Decision making
Problem solving
Experimental Inquiry
Investigation

⑤ METACOGNITION

Goal specification
Process monitoring
Monitoring Clarity
Monitoring Accuracy

⑥ SELF

Examining importance
Examining Efficacy
Examining Emotional response
Examining motivation