

Novice to Expert: the Dreyfus model of skill acquisition

Introduction

This document contains two versions of the Dreyfus 'novice to expert' model, one combining the main features of both versions of the model published in the early 1980s, and the other taken from the Institute of Conservation's professional standards.

The Dreyfus model is used fairly widely (a) to provide a means of assessing and supporting progress in the development of skills or competencies, and (b) to provide a definition of acceptable level for the assessment of competence or capability.

The 'expert' level does not signify that development stops, as expert practitioners need to evaluate their practice and keep up-to-date with new evidence.

Introduction and adaptations of the Dreyfus model by Stan Lester. If you wish to use extracts from this document, please reference the URL as well as including a reference to the original source materials.

Further reading

Dreyfus, H L and Dreyfus, S E (1986) *Mind over Machine: the power of human intuition and expertise in the age of the computer*, Oxford, Basil Blackwell

Benner, P (1984) *From novice to expert: excellence and power in clinical nursing practice*, Menlo Park CA, Addison-Wesley

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Document located at

<http://www.sld.demon.co.uk/dreyfus.pdf>

Novice-to-Expert summary

Novice

Has an incomplete understanding, approaches tasks mechanistically and needs supervision to complete them.

Advanced Beginner

Has a working understanding, tends to see actions as a series of steps, can complete simpler tasks without supervision.

Competent

Has a good working and background understanding, sees actions at least partly in context, able to complete work independently to a standard that is acceptable though it may lack refinement.

Proficient

Has a deep understanding, sees actions holistically, can achieve a high standard routinely.

Expert

Has an authoritative or deep holistic understanding, deals with routine matters intuitively, able to go beyond existing interpretations, achieves excellence with ease.

Novice-to-Expert scale (1)

| Level | Stage | Characteristics | How know- ledge etc is treated | Recognition of relevance | How context is assessed | Decision- making |
|-------|------------------------------|---|--------------------------------------|--------------------------------|-------------------------------|---------------------|
| 1 | Novice | Rigid adherence to taught rules or plans Little situational perception No discretionary judgement | Without reference to context | None | Analytically | Rational |
| 2 | Advanced beginner | Guidelines for action based on attributes or aspects (aspects are global characteristics of situations recognisable only after some prior experience) Situational perception still limited All attributes and aspects are treated separately and given equal importance | In context | | | |
| 3 | Competent | Coping with crowdedness Now sees actions at least partially in terms of longer-term goals Conscious, deliberate planning Standardised and routinised procedures | | | | |
| 4 | Proficient | Sees situations holistically rather than in terms of aspects Sees what is most important in a situation Perceives deviations from the normal pattern Decision-making less laboured Uses maxims for guidance, whose meanings vary according to the situation | | Present | Holistically | |
| 5 | Expert | No longer relies on rules, guidelines or maxims Intuitive grasp of situations based on deep tacit understanding Analytic approaches used only in novel situations or when problems occur Vision of what is possible | | | Intuitive | |

Adapted from: Dreyfus, S E (1981) *Four models v human situational understanding: inherent limitations on the modelling of business expertise* USAF Office of Scientific Research, ref F49620-79-C-0063; Dreyfus, H L & Dreyfus, S E (1984) "Putting computers in their proper place: analysis versus intuition in the classroom," in D Sloan (ed) *The computer in education: a critical perspective* Columbia NY, Teachers' College Press.

Novice-to-Expert scale (2)

| | Knowledge | Standard of work | Autonomy | Coping with complexity | Perception of context |
|----------------------|--|--|--|---|---|
| 1. Novice | Minimal, or 'textbook' knowledge without connecting it to practice | Unlikely to be satisfactory unless closely supervised | Needs close supervision or instruction | Little or no conception of dealing with complexity | Tends to see actions in isolation |
| 2. Beginner | Working knowledge of key aspects of practice | Straightforward tasks likely to be completed to an acceptable standard | Able to achieve some steps using own judgement, but supervision needed for overall task | Appreciates complex situations but only able to achieve partial resolution | Sees actions as a series of steps |
| 3. Competent | Good working and background knowledge of area of practice | Fit for purpose, though may lack refinement | Able to achieve most tasks using own judgement | Copes with complex situations through deliberate analysis and planning | Sees actions at least partly in terms of longer-term goals |
| 4. Proficient | Depth of understanding of discipline and area of practice | Fully acceptable standard achieved routinely | Able to take full responsibility for own work (and that of others where applicable) | Deals with complex situations holistically, decision-making more confident | Sees overall 'picture' and how individual actions fit within it |
| 5. Expert | Authoritative knowledge of discipline and deep tacit understanding across area of practice | Excellence achieved with relative ease | Able to take responsibility for going beyond existing standards and creating own interpretations | Holistic grasp of complex situations, moves between intuitive and analytical approaches with ease | Sees overall 'picture' and alternative approaches; vision of what may be possible |

From the professional standards for conservation, Institute of Conservation (London) 2003 based on the Dreyfus model of skill acquisition.