The Double Heuristic Method

Welcome to
THE DOUBLE HEURISTIC METHOD (DHM)
PERSPECTIVES ON HOW TEACHERS DEAL WITH AN ALTERNATIVE MODEL FOR TEACHING IN THE VET SECTOR
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The paper provides:
• A summary of the literature review,
• Methodology,
• Data collection and analysis, as well as
• Findings of the research so far.

A summary of the literature review
Training Packages (TP) are regarded, as Gonczi (2004) has noted, as a culmination of a way of thinking that has been evident within new reforms in Australia, that of ensuring that what a VET system delivers is what industry actually demands.

Prior to TP’s
Prior to TP’s there was agreement that all VET delivery would be competency based and there would be an industry led system (Schofield & McDonald, 2003:2).

Training Packages
“Require pedagogical approaches and strategies that vary from those traditionally used in the VET sector” (Chappell 2003b: viii).
These pedagogical strategies require a new theoretical framework that is based on the concept of competence.

The term Competence
At the outset, it was important to establish a clear definition of competence as the foundation stone upon which the theoretical framework can be constructed.
Initially, in 1990, the National Training Board (NTB) defined competency as:

“the ability to perform the activities within an occupation or function to the level expected in employment”

Given that competence is broader than ‘ability to perform’ (ANTA 2004), the existing definition is deemed to be too narrow.

In 1991, NTB redefined competency as:

“specification of knowledge and skills and application of that knowledge and skills within an occupation or industry level to the standard of performance required in employment”

In 1992, the definition of competency was even further broadened by the Mayer Committee, (1992, p 4) as:

“performance is underpinned not only by skill but also by knowledge and understanding, and that competence involves both the ability to perform in a given context and the capacity to transfer knowledge and skills to new tasks and situations.”

Given that, in 2004, High Level Review (HLR) concluded that competency is a broader concept than the ability to perform workplace tasks and

In defining competence it is necessary to clearly distinguish between work performance, as the physical component, as well as the constituents of competence, as the conceptual component

A new definition was required.

In 2005 Competence was redefined on this basis as:

- “a quality that needs to be developed by the learners both conceptually and physically.
- It needs to be conceptually developed in the minds of the learner based on the constituents of competence (underpinnings and attributes), and physically developed and perfected by performance (based on performance criteria)
- resulting in a balanced hands-and-minds equilibrium.”
Double Heuristic Method

- The linking of the conceptual development, or intellectual development, the (Mind) to physical development, the (Hands) are utilised and illustrated in the Double Heuristic Method (DHM).

DHM was constructed on the basis of HLR findings

- DHM is an approach designed to aid teachers in session and assessment planning in their teaching programs.
- DHM diagram unlocks the structure of knowledge embedded in the competency events (activities, tests, tasks, assessments etc).

The Double Heuristic Method (DHM) is comprised of two heuristics:

- The First Heuristic
- The Second Heuristic
Second Heuristic

The work on second heuristic commences by embedding the first heuristic at the foot of the ‘W’ diagram (Figure 2).

Focus of the research

- The focus of the research, principally, is on the competency development process managed by practitioners.
- To identify how they benefit from application of the Double Heuristic Method (DHM) to their practice and how their learners are assessed on this basis.

Formulating the required heuristics

- They then formulate the required heuristics for each session and assessment to facilitate the learning process.
- In developing session plans and assessment tools, they are guided by DHM.
If competency event is an assessment the following are listed under strategies:

- Assessment strategies,
- Assessment instruments,
- Critical aspects and
- Expected evidence

Methodology

- **Epistemology** – Constructionism
- **Theoretical Perspective** – Interpretivism
- **Methodology** – Grounded Theory
- **Methods** - Semi-structured interviews

Constructionism Epistemology

- Constructionism rejects objectivism view of human knowledge
- Meaning comes into existence in and out of our engagement with realities
- Meaning is not discovered, but constructed
- Different people may construct meaning of the same phenomenon in different ways

Theoretical Framework

- As this thesis is centred on the perspectives of VET practitioners on the application of DHM for the teaching of the Units of Competency of the Training Packages, a qualitative approach within the Interpretivism Paradigm was the most appropriate.

Methodology - Grounded Theory

- The focus on how VET teachers deal with DHM necessitated the use of Grounded Theory as the Methodology
- that is shaped by the conceptual framework of Symbolic Interactionism.
- Based on Herbert Blumer’s three premises within the Symbolic Interactionist tradition:

  - **The first premise** is that, “human beings act towards things on the basis of the meanings that the things have for them.”
  - **The second premise** is that, “the meanings of such things is derived from, or arises out of, the social interaction that one has with one’s fellows”.
  - **The third premise** is that, “these meanings are handled in and modified through an interpretive process used by the person in dealing with the things he encounters.”
Methods

- Semi-structured interviewing has been used to collect data.
- These methods are consistent with symbolic Interactionism.
- Involve three major types of coding.

Three major types of coding

- Open coding - a process in which the collected raw data will be broken down, compared, and conceptualised, resulting in categorised data.
- Axial coding - to connect each of the identified categories in an attempt to build a dense texture of relationships around the axis.
- Selective coding - a central or core category is identified.

The final stage of data analysis

- The final stage is planned to take place during the second half of 2010.
- The categories that were generated and developed will be integrated into a theory about how teachers deal with DHM.

Emerging Concepts

- Improving Performance - DHM improves teaching strategies.
- Communication effectiveness - DHM allows teachers to communicate knowledge more effectively.
- Guiding - "using DHM the learners as well as the teachers have got the guidelines".
- Clarifying Relationships - "it is the connectedness of the components that make sense in DHM".
- Managing - "DHM is a useful approach to manage the delivery.
- Confirming - "DHM removes fuzziness in VET teaching practices."
- Precise - "using DHM what you doing here, in actual fact is 'valid'.""
- Pragmatic - "DHM maintains an appropriate balance between practical and theoretical."
- Seeing the picture - "DHM gives us a clear picture."".
- Constructiveness - "In VET so many 'bits and pieces' are provided, but there is no structure to it...DHM allowed me to articulate better."
Conclusion

• In Vocational Education and Training (VET), there are lots of ‘bits and pieces’ to do and/or comply with, but there is no structure to facilitate the process of compliance.

• They see that DHM framework fulfils this role because it has a process, it has a structure, and it has relevant templates, and it is based on sound pedagogical underpinnings.

Question Time

Thank YOU for Listening, any questions??