

### 3. Link to Learning and Teaching Theories

#### ***Constructive Alignment: John Biggs***

Teaching is effective when it supports those activities appropriate to achieving the curriculum objectives thereby encouraged students to adopt a deep approach to learning. To work properly all elements of teaching and learning activities, curriculum objectives and the assessment tasks must be aligned to each other. The critical components include: the curriculum, the teaching methods, the assessment approaches and the methods of reporting, the climate created for interactions with students and the institutional culture. See Biggs. J. (1999).

#### ***Experiential Learning: David Kolb***

Kolb created his model of cognitive processing; how the process of learning happens in the brain, comprised of four elements: concrete experience, observation, reflection and formation of abstract concepts and presented them in the experiential learning cycle in 1975. This later developed in 1984 into the use of concrete, 'here and now' experience to test ideas and the use of feedback to change practices and theories. These are the key aspects of the developmental nature of his approach. See Kolb.D, (1984) and Jarvis. P, (1987).

#### ***Social constructivist assessment process cycle: Chris Rust***

The social-constructivist view of learning argues that knowledge is shaped and evolves through increasing participation within different communities of practice. The social constructivist process model of assessment argues that students should be actively engaged with every stage of the assessment process in order that they understand the requirements of that process, the criteria and the standards being applied and that they should subsequently produce better work.

#### ***Multiple Intelligences: Howard Gardner***

Howard Gardner viewed intelligences as '*the capacity to solve problems or fashion products that are valued in one or more cultural settings*'. He initially formulated a cognitive model of seven intelligences. Because of their close association with cultures they rarely operate independently but are used at the same time and tend to complement each other as people develop skills or solve problems. This recognises that students learn and think in very different ways and thus provides a conceptual framework for assessment and pedagogical practices. Gardner advocates that teachers need to attend to all intelligences. For more information:

<http://www.infed.org/thinkers/gardner.htm>.

#### ***VARK: Neil Fleming***

VARK is not a learning style but deals with only one dimension of the complex amalgam of preferences that make up a learning style. These preferences of Visual, Aural, Read/Write and Kinesthetic, are about the ways that they want to take-in and give-out information. The VARK questions and results focus on the ways in which people like information to come to them and the ways in which they like to deliver their communication. The questions are based on situations where there are choices about how that communication might take place. Fleming found that limiting VARK to modal preferences had the most success in assisting students with their learning. Of course, changing the other dimensions affected learning, but it was the modal preferences that had the most direct application for helping learning. For more information

<http://www.vark-learn.com/english/index.asp> and Fleming N and Baume D (2006)

### ***Assessment Supports Learning: Gibbs and Simpson***

The power of assessment to influence learning is well reported and Gibbs and Simpson (2002) identified eleven conditions under which assessment has been established as supporting learning. Three are essentially about motivation, one refers to creating learning opportunities and seven are all about aspects of feedback. The eleven conditions are summarised (Bryan and Clegg 2006) as 5 areas:

- Quality and distribution of student effort
- Quality and level of student effort
- Quality and timing of feedback
- Quality of feedback
- Student response to feedback

Sambell & McDowell (2006) provide six principles or learning conditions in which the complexity is emphasised:

- sparing use of summative assessment
- the need for extensive assessment opportunities
- the importance of formal and informal feedback
- the need to develop students' abilities to direct their own learning,
- to progress and support the learning of others?.

### ***Feedback as part of the assessment cycle***

In addition to the work and guidance of Gibbs and Simpson (2002) and Gibbs (2006) about the importance of the role of feedback in learning, Nichol and Macfarlane-Dick (2004) present seven principles for good feedback practice that might help support learning. Nichol and Milligan (2006) develop this to suggest how formative assessment and feedback might be used to promote the development of self regulated learning - active control by students of some aspects of their own learning i.e. setting of learning goals and the monitoring and regulating of progress towards goals.