

## Learning Styles

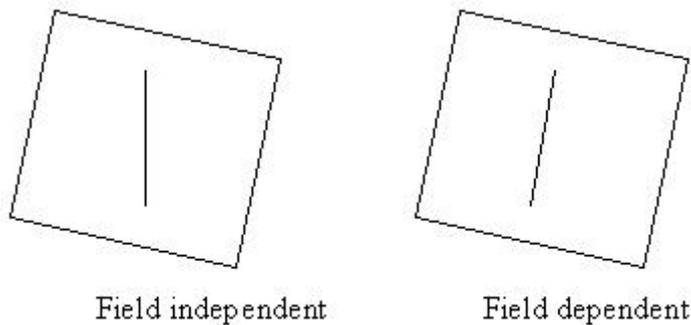
### Introduction

So far we have been assuming all learners to be the same in whichever theory of learning we have considered. However, we know from daily life that people differ in many ways so it would not be surprising if they differed in the way they learn. This topic describes just two of the many different 'cognitive styles' that have been described, which are relevant for learning.

### Field dependence

One of the most studied differences between individuals is the distinction between 'field dependence' and 'field independence'. 'Field' here means context or surroundings. Some people are more, and some less, influenced by the context when performing a skill or learning. A range from these two extremes has been described using simple experiments, started by Witkin (1971).

A simple example is a person sitting in a dark room and trying to line up a luminous rod vertically. Around the rod is a luminous square, which may itself be aligned vertically, or at an angle. Field dependent people are more affected by the position of the square when aligning the rod so that they fail to align it vertically by as much as 30 degrees. Field independent people ignore the square and align the rod.



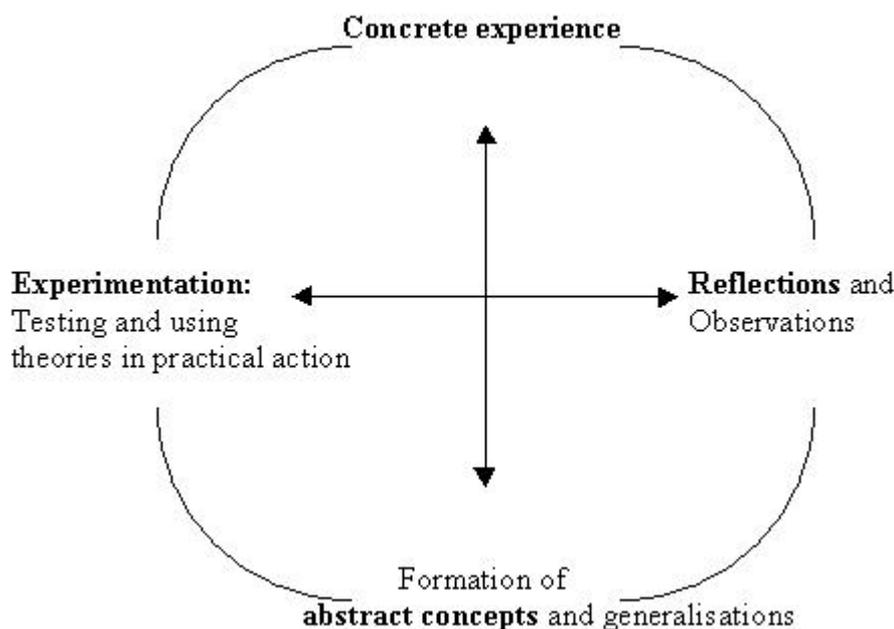
So what? This might seem to be an interesting foible with no practical importance to teaching, but in fact it seems to be the tip of an iceberg. People who are field independent on such a test also ignore being in a tilted room when asked to align themselves vertically (sit upright), while others cannot. This implies differences between people in the area of perception, but studies have shown a correlation of this ability with a range of wider personality characteristics and social interaction patterns. The table 6.1 from Tennant (1980) in the appendix lists some relevant to learning. Field dependent people are better at learning social material and learning it in a social way. Field independent people are less reliant on being provided with a structure to the subject and are more self-motivated. Field dependent people are responsive to external reinforcement, they rely on externally provided structure, they focus on

salient clues when identifying concepts, and they are better at learning social material. These wider differences correlate with the results of the simple perceptual tests.

Field independence in perceptual tests might be regarded as an ability, which is a part of general intelligence. It would always be better to be field independent. However, the wider characteristics of field dependence are an advantage in some circumstances, so we are looking at a difference in type of intelligence rather than a degree of intelligence.

### **The experiential learning model**

The differences of learning style described by Kolb and Fry have some similarities with those just discussed, and in addition they are related to a particular model of learning – ‘the experiential learning model’.

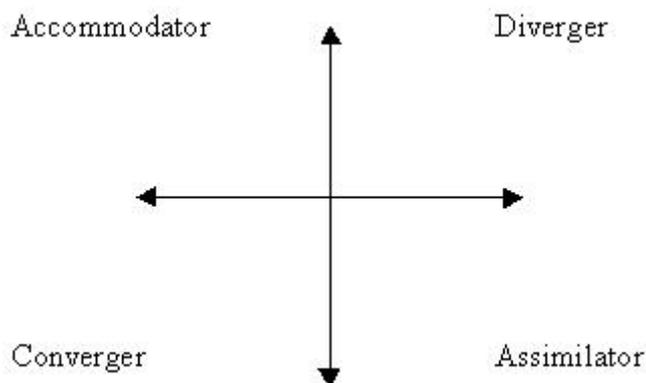


Learning is described as a four-stage cycle (proceeding clockwise in the diagram) so that the learner needs all four abilities, but may not have them in equal measure. The ideal learner must be able to involve himself fully, openly and without bias in new experiences (Concrete Experience), he must be able to reflect on and observe these experiences from many perspectives (Reflect and Observe), he must be able to create concepts that integrate his observations into logically sound theories (Abstract Concepts), and he must be able to use these theories to make decisions and solve problems (Experimentation). (Kolb 1975, my parentheses)

The four are organised in two dimensions (vertical and horizontal in the diagram):

- concrete experience ability versus abstract concept ability
- reflection and observation versus experimentation, testing and using ability

These two independent scales of learning style (comparable with field dependence & independence) are described as a 'learning style inventory'. People are asked to describe their own learning styles in terms of words like 'receptive' and 'feeling' in contrast to words like 'rational' and 'analytical'. This places them somewhere on the (vertical) scale between concrete experience and abstract conceptualisation. Similarly, preferences for other words give a position on the (horizontal) scale between experimentation and reflection. There is thus a grid of four types of learners (and all combinations between them).



There has been research linking learning styles to such characteristics as vocational choices, socialisation and preference for teaching style. Furthermore, different learning styles are appropriate in different environments.

### **The significance of learning styles**

We have now looked briefly at three dimensions of learning style:

- Field dependence/independence
- Abstract conceptualization versus concrete experience
- Experimentation versus reflection

The first point about learning styles, for is that they show us that ability in learning is not a linear scale of intelligence. Some styles are more suitable in some circumstances, they are equally valid ways of understanding the world. On the other hand, field independence seems to be generally more useful in academic situations. Kolb and Fry say that the best learners can use all four of their styles, as appropriate.

The second point is whether a person's learning style is a fixed part of their personality. The answer is No. Witkins suggests that field dependence is due to socialisation rather than to genetic factors, although it may be quite stable unless challenged. However, it can be altered. For example if field independent people are guided in attending to social material, they can perform as well as field dependants in it. It is better to think of learners as having a range of learning styles available for different circumstances (in some, a narrow and in others, a broader range).

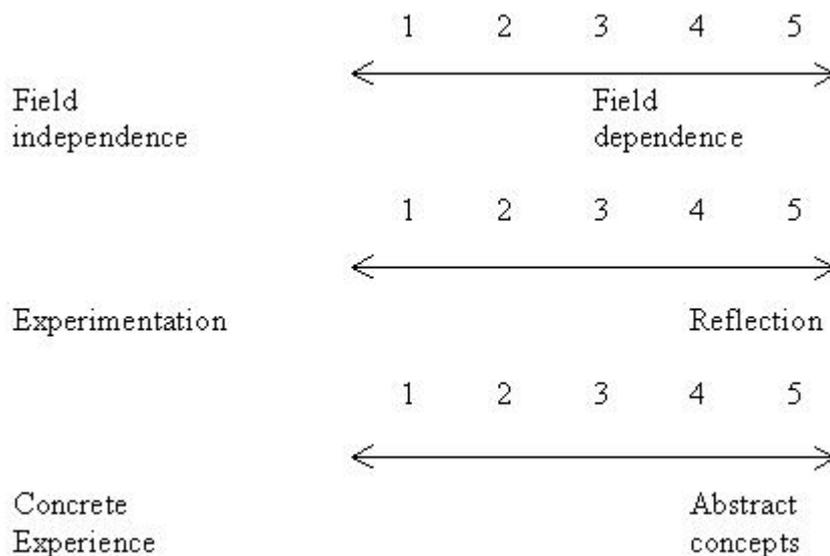
Fry and Kolb suggest that the 'complete' learner can not only adopt a style suitable for the occasion but also can integrate all four styles.

The third point is, What significance does this have for teaching? Should teaching style be adapted to the learner's dominant learning style? There is evidence that teachers and students are happier when their styles match, there is better communication and understanding. This might indicate that teaching style should adapt to learner style. However, the best learning environments do not necessarily conform to the learner's expectations. There is a place in learning for conflict, or at least for challenging or unsettling experiences. 'Accommodation' to contradictory experiences is important in development (see Piaget, above). If students are to become more capable, then part of the purpose of education is that they should broaden the range of their learning styles.

Where possible, helping learners to understand their own learning processes (metacognition) will help them to learn better and to become more independent learners. This includes encouraging learners to expand their learning styles. It is best to provide a variety of teaching styles (learning environments) so that a diversity of types of learners can thrive, and all can attempt different styles.



- *Take three of your students (A, B, and C). Label the position of each on the three scales below with the letters.*



*For each student, what difference will this information make to your design of his or her curriculum?*

## References

Kolb D. & Fry R. 1975 Towards an applied theory of experiential learning 33-57 in C.Cooper *Theories of Group Processes* Wiley, London

Tennant, M. 1988. *Psychology and adult learning*. Routledge, London

Witkin, H., Moore, C., Goodenough, D. and Cox, P. 1977 Field-dependent and field-independent cognitive styles and their educational implications. *Review of Educational Research* 47, (1) 1-64