

The accidental resurrection of the idea of ATI (aptitude-treatment interaction)

Ming Fai Pang - University of Hong Kong, China

Ference Marton - Goteborg University, Sweden

In helping learners make a novel meaning their own, such as teaching students a new concept in school, we frequently point to examples that share the aimed-at meaning, but differ otherwise. This approach rests on the assumption that novel meanings can be acquired through the experience of sameness against a background of difference. This paper, through an experimental study, tests the conjecture derived from Variation Theory (of learning) that new meanings are acquired from experiencing differences against a background of sameness, and that the pattern of variation and invariance consistent with the conjecture is relative, both to the object of learning and to the learners. The specific object of learning was the economic principle that the change in price is a function of the relative magnitude of change in demand and supply. Two patterns one that was consistent with the conjecture and one that was not were built into learning resources. A total of 231 Grade 10 students from seven schools representing different levels of academic abilities were randomly divided into two groups, and each group was supplied with one of the two sets of learning resources. The students were asked to engage in independent learning to appropriate the object of learning. The results of the pre- and post-test showed that different patterns of variation and invariance were consistent with the conjecture for different groups of students and that those that were aligned with the prerequisites of the learners yielded strikingly better results than those that were not so aligned.