

## CONCEPT MAPS AS A TOOL FOR ASSESSING GIFTED KNOWLEDGE

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**Abstract.** Recent research in gifted education provision has focused on the adequacy of commonly used identification procedures such as intelligence quotients (IQ). Investigators such as Ziegler (2008) have argued against the use of trait measures and for identification based on the use of quality of learning outcomes. A second recent development in the study of gifted learning has focused on alternative frameworks such as the novice - expert knower model (Munro, in press). This model focuses on the differences between a novice and an expert knowledge of a topic to identify a gifted understanding.

Concept maps have been reported to be effective tools in the identification of knowledge that a learner possesses (Edwards & Fraser, 1983). Furthermore, distinctions have been made between the concept maps of novices and experts (Cañas & Novak, 2006; Novak & Cañas, 2008). Experts construct concept maps that are larger, more complex, have more connections, and which are qualitatively more sophisticated than novices (Schau & Matter, 1997). Based on the expert-knower model of gifted learning (Munro, in press), we pose the question of whether it possible to examine the differences between a novice and an expert knowledge of a topic to identify a 'gifted understanding' using concept maps as the tool for assessment. Furthermore, we are proposing to address the issue of whether it is valid to look at how gifted children interpret teaching through assessments of their knowledge acquisition. The question will be addressed using concept maps to assess quantitative and qualitative differences in students' knowledge before and after instruction.

The proposed study will contribute to the field of gifted education by providing an approach to assessment of domain-specific expertise. Capturing domain-specific knowledge can facilitate the process of placing students on a *learning path*, which can lead to *excellence* as suggested by Ziegler (2005). Furthermore, the proposed study will contribute to the understanding of how gifted children interpret teaching and how this may impact on future pedagogical provision for gifted students.