EXAMINING THE RELATIONSHIP BETWEEN MORAL REASONING, COGNITIVE REASONING AND LEARNING PREFERENCES OF HIGH-SCHOOL STUDENTS IN SELECTED SOUTH AUSTRALIAN SCHOOLS

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Abstract

Moral reasoning involves making value judgements and decisions on a particular course of action, specifically with the rightness and wrongness of that action. Through programmes in moral education, such as problem solving on moral and ethical dilemmas, the moral reasoning skills and abilities of students can be stimulated and developed. Although much research has been done with moral reasoning, there has been little research that has explored the relationship between moral reasoning and cognitive reasoning.

The present study examined the effects on moral reasoning by cognitive reasoning levels and learning preferences of high school students. The study also investigated the effect of student variables (age, class, sex and school types) on the stages of moral reasoning, cognitive reasoning levels and the learning preferences of these students.

The study involved 227 students from Years 9 to 12 with ages ranging from 14-18 from government, catholic and independent schools in South Australia. In order to identify the moral reasoning stages of the students, the Defining Issues Test (DIT) was administered. The cognitive reasoning levels of these students were ascertained using the Arlin Test of Formal Reasoning (ATFR) and students' learning preferences were assessed using the Index of Leaning Styles (ILS), the Learning Preference Inventory (LPI) and the Visual, Aural, Read/Write, Kinaesthetic (VARK). The authors for DIT, ILS, LPI and VARK have posited that reliability indices reported are accurate as they have been tested with large sample sizes across a number of countries. Validation of ATFR was undertaken through multi trait, multi methods reported elsewhere and through the Rasch analysis.

It was evident from the results that scores on DIT increased with age with a steady increase in moral reasoning stages from year nine to 12. In terms of sex, females outperformed males in the DIT scores but there were no differences in moral reasoning stages from the different school types. It was also found that that in the ATFR test, scores increased with age and class and although males and females fared differently in different subtests of ATFR, there was no overall significant difference in their performance.

Non parametric statistics were used to identify learning preferences of these students. While there were no differences in the learning preferences between boys and girls or

among the different school types, there were some differences among the different age groups. Older students had a preference for more innovative and creative type of learning as compared to younger students as measured by ILS and students in the higher grades also had a preference for different sensory modalities as compared to their younger counterparts as measured by VARK.

Furthermore, it was evident from the study that DIT had strong positive associations with the ATFR Cognitive Levels as described by Arlin (1984) and the ATFR subscales. Students who had higher scores on DIT were operating at the formal reasoning level and the DIT questionnaire evoked reasoning skills around the eight schemata (Volume, Probability, Correlation, Combination, Proportional Reasoning, Mechanics and Frames).

There were also interesting results from the Learning Preferences Instruments where students who were categorised as Intuitive versus Sensing learners had strong associations with DIT. The results provide evidence that DIT has some strong reasoning and critical thinking component as Intuitive Sensing learners are described as analytical and reflective learners.

Structural Equation Modeling through the LISREL software was used to examine the moderating effects of sex, class and school types on the direct effects of cognitive reasoning levels on the moral reasoning stages. Through LISREL it was confirmed that girls performed better than boys on moral reasoning skills. Although the moderation effect in the performance of years nine and 10 was minimal, there was a significant relationship between cognitive reasoning levels and moral reasoning stages in senior high school. When the schools were separated using LISREL, students in catholic and independent schools performed better than students in government schools.

Furthermore, LISREL was used to explore the mediating effects of students' learning preferences on the direct effects of cognitive reasoning levels on moral reasoning stages. Moreover, this study found a number of mediating effects that were significant.

Although the findings of this study may not be generalisable due to the small sample size and necessary convenience sampling they have important implications in assisting programs in schools that promote both cognitive reasoning and moral reasoning among students in the junior and senior high schools through specific professional development and teacher education programmes. Importantly, the moderator and mediation analyses

present to those entrusted with developing curriculum around cognitive reasoning, moral reasoning, and the delivery of instructions in classrooms, pertinent factors and variables that need to be taken into consideration.

Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institutions and, to the best of my knowledge and belief, contains no material previously published or written by another persion, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future be used in a submission for any other degree or diploma in any university or other tertiary institution without the prior approvsl of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

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Acknowledgements

Professional learning of teachers can be manifested through a number of ways, and a research thesis provides the ability to link theory with practice and directs practice-informed research. However, balancing a full-time teaching responsibility in a Special School, a full-time family and parental obligations, and a part-time research passion does challenge the 24 hours per day availability in wanting to excel in all three facets of work-life balance is a major challenge.

Passion for teaching and learning and a moral obligation to the teaching profession saw me perform academic acrobatics. This education endurance was set alight by the late Professor Kevin Marjoribanks in September 2004, who provided my first supervision to the research study into cognitive and moral reasoning, supported with a University of Adelaide Scholarship. His sound advice was that "you should continue your role as a Special Education teacher, and extend your professionalism though research." I am greatly indebted to him for urging me to undertake this part-time study on moral reasoning.

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