THE MIND-MAPPING APPROACH:
A MODEL AND FRAMEWORK
FOR GEODESIC LEARNING

BY
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The financial assistance of the Centre for Science Development towards this research is hereby gratefully acknowledged. Opinions expressed in this thesis and conclusions arrived at are those of the author and are not necessarily to be attributed to the Centre for Science Development.
This thesis is dedicated to ...

my husband Mac,

and my children

Jessica, Dominique and Jeffrey

for more love, support and inspiration

than can be measured.

This thesis is also dedicated to

discovering the gift of potential in every person.

In a gentle way you can shake the world:

Ghandi
I owe special thanks to many special people:

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ABSTRACT


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The current study identifies the reasons why change in traditional perceptions of learning is needed by tracing the philosophies of traditional methods and their effect on the perception of learning, and proposes an alternative geodesic approach, the Mind-Mapping Approach (MMA). Inherent in the model is the implication that traditional methods do not facilitate effective holistic thinking and as a result, do not produce effective lifelong learners. Extrapolated from the MMA model and its assumptions, is a practical framework, the MMA, that, when implemented within learning environments, will foster geodesic thinking which is in natural compliance with the functioning of the brain and therefore to be preferred.

The study tested the validity of the above assumption by providing training in an alternative geodesic approach, the MMA, to a group of 45 teachers and therapists that work with learning disabled pupils - this comprised the first experiment of this study. The teachers and therapists in turn used the MMA methods with their pupils (639) - this comprised the second experiment of the study. In this way both the MMA as a geodesic framework, and the actual effectiveness of the MMA training programme in conveying geodesic principles, were evaluated.

The results indicated that although significant benefit was derived by the teachers and therapists from the MMA training, these were conservative. Furthermore, the overall longitudinal trends of the pupils’ results also indicated that a significant positive change was experienced by the pupils with the introduction of the MMA methods, but not to the extent predicted. It is speculated that this conservative, although significantly positive improvement
in the teachers, therapists and pupils is attributed to the fact that the MMA methods are geodesic facilitating improved thinking, problem-solving and research skills, and innovative learning. However traditional methods of teacher training, testing and evaluating do not facilitate these skills as their emphasis is on the accrual as opposed to creation of facts. It is possible therefore that the conservatively positive results of this study reflect the "carry-over" effect of geodesic training. It can be said that the partial application of the MMA methods by the teachers and therapists did improve the performance of the pupils and that this study was therefore successful, but that the results would have been more positive had the pupils been evaluated in a way that matched the geodesic training. In addition, the study provides valuable information regarding the effect of geodesic systems on traditional systems of learning.
Hierdie studie identifiseer die redes vir die noodsaaklikheid om tradisionele leerpersepsies te verander deur die filosofie van tradisionele metodes en hul effek op die leerpersepsie na te gaan, en dit stel ‘n alternatiewe geodetiese benadering voor, bekend as die breinkaartbenadering (BKB) (Engels: mind-mapping approach (MMA) ). Inherent in die model is die implikasie dat tradisionele metodes nie doeltreffend holistiese denke voorthelp nie, en gevolglik nie doeltreffende lewenslange leerlinge voortbring nie. ‘n Praktiese raamwerk word uit die BKB-model en sy aannames ekstrapoleer, nl die BKB wat, wanneer dit binne leeromgewings geimplementeer word, geodetiese denke sal bevorder wat in natuurlike voldoening is met die funksionering van die brein en derhalwe verkieslik is.

Die studie het die geldigheid van die bogenoemde aannome getoets deur opleiding in ‘n alternatiewe geodetiese benadering, die BKB, te verskaf aan ‘n groep vna 45 onderwysers en terapeute wat met leergestremde leerlinge werk. Dit het die eerste eksperiment van die studie uitgemaakt. Die onderwysers en terapeute het op hul beurt die BKB-metodes met hul leerlinge (639) gebruik, wat die tweede eksperiment van die studie uitgemaak het. Sodoende is beide die BKB as ‘n geodetiese raamwerk en die eintlike doeltreffendheid van die BKB-opleidingsprogram in die oordra van geodetiese beginsels geevalueer.

Die resultate het aangedui dat, alhoewel onderwysers en terapeute beduidend baat gevind het by die BKB-opleiding, dit konserwatief was. Verder het die langstendense van die leerlinge se resultate ook aangedui dat ‘n noemenswaardige positiewe verandering deur leerlinge
ervaar is met die invoering van die BKB-metodes, maar nie in die mate wat voorspel is nie. Daar word bereken dat die konserwatiewe, alhoewel aansienlik positiewe verbetering in die onderwysers, terapeute en leerlinge toeskryfbaar is aan die feit dat die BKB-metodes geodeties is, wat verbeterde denke, probleemoplossing en navorsingsvaardighede, sowel as innoverende leer moontlik maak. Tradisionele leer-, opleidings-, toets- en evalueringsmetodes faciliteer egter nie hierdie vaardighede nie, aangesien die klem op die memorisering van feite val. Dit is dus moontlik dat die konserwatief positiewe resultate van hierdie studie die "oordra"-effek van geodetiese opleiding weerspieel. Daar kan gese word dat die gedeeltelijke toepassing van die BKB-metodes deur onderwysers en terapeute die prestatie van die leerlinge verbeter het, en dat die studie dus suksesvol was, maar so 'n manier geevalueer kon word wat die geodetiese opleiding geewenaar het. Die studie verskaf ook waardevolle inligting rakende die effek van geodetiese stelsels op tradisionele stelsels.
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