THE INFLUENCE OF ACADEMIC SELF-CONFIDENCE ON MATHEMATICS ACHIEVEMENT

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Abstract

It seems as if there is a continued problem with mathematical performances nationally. The rate, at which FET (Further Education and Training) phase learners discontinue Mathematics as a result of poor mathematical performances, is of great concern. This research study determined how academic self-confidence could have an influence on learners' abilities to perform in Mathematics. The literature review confirmed that there could be a link between academic self-confidence and mathematical performance. Consequently, the researcher wanted to establish if the same could be found at a school where the emphasis is very much on mathematical achievement. The school is based in Northern Johannesburg (D10) in Gauteng, South Africa. By applying an explanatory mixed method approach (quantitative, followed by qualitative methods), the researcher identified a clear link between this school's learners' abilities to perform in Mathematics and their academic self-confidence. Amongst others, positive links were also identified between the learners' comprehension of Mathematics, their problem-solving skills as well as educator assistance, which in turn influence their academic self-confidence and consequently also their performances. A cycle of mathematical influences was identified that demonstrated that the influence is not only working one way, but that a cycle forms; academic self-confidence influences the learner's ability to perform in mathematics and mathematical performances also influence academic self-confidence, causing a continuous cycle of influence.

Keywords:
**Opsomming**

Dit wil voorkom of daar in voortgesette probleem met die swak nasionale wiskunde-uitslae in die VOO (Verdere Onderwys en Opleiding) fase bestaan. Die tempo waarteen leerders Wiskunde staak as gevolg van die swak uitslae, is rede tot groot kommer. Hierdie navorsingstudie het bepaal wat die moontlike invloed van akademiese selfvertroue is op 'n leerder se vermoë om in wiskunde te presteer. Die literatuuroorsig dui daarop dat daar wel 'n verband tussen akademiese selfvertroue en wiskunde prestasies kan wees. Gevolglik, wou die navorser bepaal of dieselfde verband gevind kan word in 'n skool waar klem gelê word op wiskunde vaardighede en prestasie. Die skool is geleë in Johannesburg-Noord (D10) in Gauteng, Suid-Afrika. Deur die toepassing van 'n verklarende gemengde benadering (kwantitatiewe, gevolg deur kwalitatiewe metodes) kon die navorser 'n duidelike positiewe verband identifiseer tussen akademiese selfvertroue en hierdie skool se leerders se vermoë om in wiskunde te presteer. Ondermeer is daar ook verbande geïdentifiseer tussen leerders se begrip van wiskunde, hul vermoë om probleme op te los asook onderwyser-ondersteuning, wat op hul beurt hul akademiese selfvertroue beïnvloed en gevolglik ook hul prestasies. 'n Siklus van invloede op wiskunde is geïdentifiseer wat bewys dat die invloed nie in een rigting alleen werk nie, maar dat dit 'n siklus vorm; akademiese selfvertroue beïnvloed die leerder se vermoë om in wiskunde te presteer, en wiskundige prestasie beïnvloed weer die leerder se akademiese selfvertroue wat 'n voortgesette siklus van invloede veroorsaak.

**Sleuteltermé:**

akademiese selfvertroue, wiskundige prestasies, wiskundige vermoëns, siklus van invloede op wiskunde, wiskundige begrip, probleemoplossing, en onderwyser-ondersteuning.
# TABLE OF CONTENTS

ACKNOWLEDGEMENTS  
ABSTRACT  
OPSOMMING

1. CHAPTER 1  
INTRODUCTION

1.1. Introduction and Rationale  
1.2. Problem Statement  
1.3. Aim of the Research  
1.4. Literature Review and Concept Clarification  
1.4.1. Mathematics  
1.4.1.1. Mastering mathematical learning  
1.4.1.2. Preconditions for successful mathematical learning  
1.4.1.3. Development of mathematical learning  
1.4.1.4. Factors influencing mathematical learning  
1.4.1.5. Resilience during mathematical learning  
1.4.2. Self-confidence  
1.4.2.1. Academic self-confidence  
1.4.2.2. Self-confidence and successful learning  
1.5. Research Methodology  
1.5.1. Research paradigm  
1.5.2. Literature review  
1.5.3. Research design  
1.5.3.1. Strategies of inquiry  
1.5.3.1.1. Correlation research study  
1.5.3.1.2. Phenomenological research study
3.3. What is Mathematical Self-Confidence? 50

3.4. Mastering Mathematical Learning 50

3.5. Preconditions for Successful Mathematical Learning 51
3.5.1. Content level 51
3.5.2. Educational level 51
3.5.3. Development level 51
3.5.4. Emotional level 52
3.5.5. Contextual level 52

3.6. Development of Mathematical Learning 52
3.6.1. Two key elements for basic Mathematics skills 52
3.6.1.1. Primary preverbal number knowledge 53
3.6.1.2. Secondary verbal or symbolic number knowledge 53
3.6.2. Four stages to grasp Mathematics 53

3.7. Gender Differences in Mathematics 54

3.8. Motivation and Mathematical Learning 55

3.9. Resilience During Mathematical Learning 56

3.10. Difficulties in Learning Mathematics 58
3.10.1. Internal factors 58
3.10.1.1. Learning problems 59
3.10.1.2. Lack of self-confidence 59
3.10.1.3. Mathematics anxiety 60
3.10.1.4. Negative attitudes towards Mathematics 61
3.10.1.5. Passivity 61
3.10.1.6. Attention deficit disorders 61
3.10.2. External factors 62
3.10.2.1. Absenteeism and illness 62
3.10.2.2. Educators and poor teaching 62
4.2.3. Literature review 72
4.2.4. Research design 73
4.2.4.1. Mixed method approach 73
4.2.4.2. Explanatory design 74
4.2.4.3. Quantitative phase 75
4.2.4.3.1. Correlation research 75
4.2.4.3.2. Validity and reliability 78
4.2.4.4. Qualitative phase 79
4.2.4.4.1. Phenomenological research 79
4.2.4.4.2. Case study 81
4.2.4.4.3. Trustworthiness, validity and reliability 82
4.2.5. Researcher's role 84
4.2.6. Psychologist's role 85
4.2.7. Population and sampling 86
4.2.8. Data collection procedure 88
4.2.9. Ethics 91

4.3. Conclusion 91

5. CHAPTER 5 92
DATA ANALYSIS AND INTERPRETATION

5.1. Introduction 92

5.2. Quantitative Analysis 92
5.2.1. Factor analysis 92
5.2.2. Statistical correlations 95
5.2.2.1. Relationships between the themes and performance 95
5.2.2.1.1. Theme 1: Attitudes towards own mathematical ability 95
5.2.2.1.2. Theme 2: Comprehension and application of mathematical concepts 99
5.2.2.1.3. Theme 3: Solving mathematical problems 102
5.2.2.1.4. Theme 4: Educator assistance 107
ADDENDUMS

Addendum A: Researcher Declaration 157
Addendum B: Participant Information 158
Addendum C: Ethics Letter of Approval 159
Addendum D: Permission to Conduct Research by the School 160
Addendum E: Permission to Conduct Research by the GDE 161
Addendum F: Consent Form for Participants 162
Addendum G: Consent Form for Parents 163
Addendum H: Academic Self-Confidence in Mathematics Questionnaire 164
Addendum I: Pilot Study – Participant Feedback 167
Addendum J: Sample Selection for Interviews 169
Addendum K: Coded Transcripts for Interviews 171
Addendum L: Proof of Language Editing 187

LIST OF DIAGRAMS

Diagram 2.1: Meta-cognition and the three types of knowledge used to ensure successful learning with confidence 36
Diagram 4.1: Explanatory Research Design 75
Diagram 4.2: Research Procedure 90
Diagram 5.1: Mathematical Cycle of Influence 131
Diagram 6.1: Positive Mathematical Cycle of Influence 138
Diagram 6.2: Negative Mathematical Cycle of Influence 139

LIST OF TABLES

Table 2.1: Identifying aspects between being self-confident and having low levels of self-confidence. 33
Table 5.1: Eigenvalues for the quantitative data 93
Table 5.2: Common factor analysis 94
Table 5.3: Questions that form factor 1
Table 5.4: Correlation coefficients between CASS, exam, promotion marks and Theme 1 (Factor 1)
Table 5.5: Questions that form factor 2 and 4
Table 5.6: Correlation coefficients between factors 2, 4 and Theme 2
Table 5.7: Correlation coefficients between CASS, exam, promotion marks and Theme 2
Table 5.8: Questions that form factor 3 and 5
Table 5.9: Correlation coefficients between factors 3, 5 and Theme 3
Table 5.10: Correlation coefficients between CASS, exam, promotion marks and Theme 3
Table 5.11: Questions that form factor 6
Table 5.12: Correlation coefficients between CASS, exam, promotion marks and Theme 4
Table 5.13: Correlations between the different themes
Table 5.14: Subthemes for Theme 1
Table 5.15: Subthemes for Theme 2
Table 5.16: Subthemes for Theme 3
Table 5.17: Subthemes for Theme 4