Personality factor in ACADEMIC ACHIEVEMENT
An investigation into the relationship between learner emotional self-concept and academic achievement among secondary school learners

Ignatius Isaac Dambudzo
Personality factor in academic achievement: An investigation into the relationship between learner emotional self-concept and academic achievement among secondary school learners

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Lower levels of academic achievement in Zimbabwe secondary schools continue to cause great concern among parents, educators and authorities in education. Initiatives, such as increasing the quantity and quality of learning resources have not raised the pass rates to the expected levels. Literature has demonstrated that self-concept was important as a mediating, predictive variable, and correlate of academic achievement and that the relationship was reciprocal and also that the quality of emotions had some influence on learning and achievement. The current study investigated the relationship between learner emotional self-concept and academic achievement of adolescents in Zimbabwe secondary schools. Results were based on 1281 questionnaire responses by adolescent secondary school learners, and from interviews. Pearson’s Correlation Coefficient test was carried out on the hypothesis while interview data explained it. The main hypothesis: There was no relationship between the emotional self-concept and academic achievement of adolescent learners in Zimbabwe secondary schools was rejected. Results showed that the emotional self-concept was significantly and positively correlated with the academic achievement. From the results and the theoretical framework, it appeared that emotional self-concept may have some influence in the academic achievement of adolescent learners. School location, type and type of attendance showed significant correlation with emotional self-concept and academic achievement. Therefore, an understanding of adolescent’s emotions, and how they operated in the learners in different learning environments by parents, educators and learners themselves, administrators was important. The study concluded that improving the emotional self-concept might be complex, it was nevertheless essential in improving the level of academic achievement of individuals and schools overall. Parents and educators should guard against behaviours towards the learners that may result in high emotions in order to prevent the deterioration or slump in learning motivation and performance overall and in specific subjects. More research is needed in different contexts and subjects in order to increase our understanding of how the emotional self-concept developed and operated in the learners, to enable those involved with the learners to gain a deeper understanding so that their assistance can be more effective.

Keywords: Emotional self-concept, anxiety, depression, academic, achievement, correlation, location, urban, rural, age, gender, school type.

INTRODUCTION

The Zimbabwe 2012 Ordinary level examination results released in early February, 2013 showed a marginal decline in the overall pass rate from 19.5% in 2011 to 18.4%, Zimbabwe Schools Examinations Council (ZIMSEC), 2013. Considerable debate ensued with outcries of falling standards of education, proliferation of untrained teachers in the schools, poor resources, low level of teacher commitment due to poor working conditions, poor quality teachers, poor supervision, extra lessons which yielded nothing but poor results, poor discipline, political interference, lack of parental support for children’s learning, inappropriate curriculum among
other reasons (Education, National News, 6/02/2013). In the same publication the Minister of Education, Arts, Sports and Culture, David Coltart attributed the decline in pass rate to a crisis in education following the 2005 – 2009 economic meltdown during which more than 20 000 teachers left the country leading to the loss of many teaching days and experienced staff hence poor results now. The myriad of reasons advanced by many in our society emphasizes the gravity of the learners’ achievement rate and the seriousness with which education is viewed by people in the country. Yet other students passed very well under the adverse conditions. It is therefore, imperative to continue the search for causes of low academic achievement to enable more and more children to achieve higher and better results. From the information outlined above, it is clear that low pass rate has been attributed to school and out of school factors, and very little if any to learners’ personality factor.

Research has documented the importance of personality factor, self-concept for learning and academic achievement (Craven and Marsh, 1996; Dembo, 1994; Hamachek, 1995; Mwamwenda, 1995; Urhahne, Chao, Florineth, Luttenberger and Paechter, 2011; Prixten, De Fraine, Van Damme, D’Haenens, 2010; Marsh and O’Mara, 2008; Hau and Kong, 2002). Very little or no research has been carried out on the relationship between self-concept and academic achievement in Zimbabwe (Dambudzo, 2013). In particular, no such research has been conducted on the relationship between emotional self-concept and academic achievement. In view of the above, the study sought to investigate the relationship between emotional self-concept and academic achievement to determine possible influence on educational achievement and to add to literature on the subject in order to understand influences on academic achievement better. In view of the above, academic achievement may not be simply a reflection of the learners’ abilities but their self-concept of ability and emotional self-concept in particular. The following section examines literature on the relationship between emotional self-concept and academic achievement.

**Literature review**

**Emotional self-concept**

According to McGrath and Repetti (2000) emotional self-concept refers to feelings such as depression, anxiety, and anger one has about oneself in a given situation. It is part of the non-academic self-concept. Kobal-Palcic and Musek (1996) describe emotional self-concept in terms of emotional stability or perceptions about oneself as being calm or relaxed or how much one worried or gets excited. Bandura (Semakane, 1994) simply describes emotional self-concept as experiences one goes through while performing or approaching a task which enables one to judge one’s capabilities.

**Emotional self-concept and academic achievement**

The possibility that emotion can influence learning; academic achievement and well-being have stimulated considerable research in recent years (Efklides and Violet, 2005; Linnenbrink, 2006; Schutz and Lavehart, 2002; Schutz and Pekrun, 2007 cited by Ahmed et al., 2010). Consequently, researchers have explored further, the antecedents and consequences of emotions in academic settings (Pekrun et al., 2002 cited in Ahmed et al., 2010). Similarly, Ahmed et al. (2010) in a study of emotions in the classroom concluded that learners’ competence and value-belief appraisals determined the nature of achievement emotions. They found gender differences in mathematics related emotions. The emotions were however, context specific according to the control-value theory of achievement emotions (Pekrun, 2006 in Ahmed et al., 2010). Control was about whether the learner felt able to tackle a curricular task while value referred to whether the learner perceived achievement as important to him or her. An imbalance between perceived capabilities and academic achievement was likely to trigger test anxiety, worry and emotionality (Liebert and Harris, 1967 in Urhahne et al., 2011). The value system determined the level of motivation with which the learner approached tasks in school. Motivation could be intrinsic (from within) or extrinsic (from external factors). Appraisal of a task as important to the learner for its own sake (intrinsic) or for a reward, a better job or admission to a higher level of education (extrinsic) determined the learner’s emotions in any given situation and had a bearing on achievement. These observations have important implications for education because higher levels of competence beliefs were generally associated with higher levels of positive emotions (enjoyment, happiness, hope and pride) while lower beliefs were associated with negative emotions (anger, anxiety, hopelessness). The learners’ competence and value beliefs determined achievement. Interventions that target learners’ socio-emotional competence should always consider individual differences because improving emotion-related self-beliefs may lead to successful adaptation at school and improved peer status. The relationship was reciprocal (Mavroveli and Sanchez-Ruiz, 2011).

Studies on the relationship between emotional self-concept and academic achievement reported that strong and negative emotions such as anxiety and depression were associated with under-achievement because they tended to reduce motivation to work while positive emotions such as excitement, enjoyment and happiness raised motivation and satisfaction leading to better
academic achievement (Brogan, 1998; Fontana, 1997; Strongman, 1996). However, small amounts of anxiety appeared to be motivational, raised confidence and academic achievement as well (Dembo, 1994; Strongman, 1996). The study sought to add to the limited literature and our understanding of the relationship between learner emotional self-concept and academic achievement and the role of emotions in education.

**Emotional self-concept variables and academic achievement**

**Emotional intelligence (EI)**

Baron (AbiSamra, 2000) sees emotional intelligence as the ability to deal with other people and with one’s feelings. Broadfoot (1998) points out the need for educators to recognise what makes one learner more keen and successful and the other less successful, the result of the learner’s emotional intelligence as much as his/her intellectual abilities. In a study of the relationship between emotional intelligence and academic success, AbiSamra (2000) reports that emotions, feelings and values were vital for a person’s well-being and achievement in life. Quality emotions and feelings, he argues, help students give their best in the classroom. For example, learners who were aversive and thought negatively could not concentrate for a long time and had more difficulties in reaching their potential than those who were positive.

Nakamura and Seligman (Fontana, 1997) reported of positive emotions as responsible for positive effort and performance. Learners displaying such emotions were free from inhibiting emotional factors. However, emotions do not always bring about positive reactions, as the following examples will show.

Goldam-Rakit and Tammingo (Fontana, 1997 in a report on emotional intelligence demonstrate that the power of strong emotions such as anxiety and anger can inhibit the working memory thereby negatively affecting learning and achievement. Poor performance may lead to depression and lower performance as well.

**Depression**

In a study of the interaction between academic achievement and self-concept, Brogan (1998) points out that feeling worthless can lead to depression, and that depression can inhibit performance. She went on to remark that if a learner does not feel worthwhile he/she may not feel like doing his/her best. Furthermore, fear of failure can lead learners to hold back and do nothing. Similarly, constant failure and the accompanying feelings of incompetence tend to be discouraging and demoralising because the student soon gets convinced that he/she lacks the ability to succeed, therefore trying does not make sense. The examples given above show that negative emotional self-concept can lead to depression and low achievement. This may lead to no action at all and poor academic achievement. This may lead to anxiety, as will be explained in the next section.

**Anxiety**

Researchers have identified different types and degrees of anxiety among learners. These are generalised fear for the total school situation, and that of specific aspects of the school such as learners, peers, particular subjects or tests. In the case of school phobia the learner may refuse to go to school altogether (Dembo, 1994). Hackett, Hutton and Levitt (Dembo, 1994) describe how some school subjects such as mathematics seem to evoke more anxiety than others. This can be explained by the learner’s low self-concept in the subject, fear for the subject, lack of trust in one’s ability in the subject and past experience which did not create confidence in the learner. Low grades and avoidance of the subject have been registered as outcomes of anxious feelings.

Wiest, Wong and Kreil (1998) reported that learners displaying higher intrinsic motivation, higher school achievement, and favourable perceptions of their competence have lower academic anxiety. Learners with perceived competence earned better grades than did those with less positive views of themselves.

Test anxiety is an example of a specific type of anxiety about academic ability evaluation. Hill and Wigfield (Dembo, 1994) remarked that test anxiety was one of the most important aspects of negative motivation with a debilitating effect on school performance. Sadly it increases through the elementary to high school and beyond, and is strongly and negatively associated with indices of intellectual and academic performance.

Covington (Dembo, 1994) identifies two dimensions of test anxiety namely, *worry* and *emotionality*. Worry was linked to the cognitive aspects of anxiety such as negative beliefs, troubling thoughts, and poor preparation, while emotionality refers to reactions like tension and nervousness. Both have a negative effect on performance but worry is worse because it persists throughout the test while emotionality declines once the test has commenced.

However, not all anxiety is associated with poor performance. Stipek (Dembo, 1994) has shown that small amounts of anxiety can facilitate learning. A feeling of confidence and preparedness for an examination and a little anxiety can serve as motivation to excel.

**Summary of emotional self-concept**

The above examples have demonstrated that emotional self-concept plays an important role in academic achievement. The emotional self-concept can either enhance or lower achievement. Anxiety, as an important
emotional self-concept variable, has been found to influence achievement negatively if intensity is high, while low level anxiety can promote achievement through increased motivation. Anxiety can be generalised to the entire school situation or be focused on a specific subject or academic task such as tests. Consequently when studying emotional self-concept it is important to identify the context, describe and explain its effect on behaviour. In view of the above background it was the intention of the study to investigate the relationship between emotional self-concept and academic achievement in secondary schools in Zimbabwe and also the possible influence of moderator variables: gender, age, grade/form, school type and location, and type of attendance (day or boarder).

**Problem statement**
In view of the above background and literature review, the research problem was stated thus: *What is the relationship between learner emotional self-concept and academic achievement in Zimbabwean secondary schools?*

**Aims of the research**
In view of the afore-mentioned problem statement the main aim of the research was to investigate the relationship between learner emotional self-concept and academic achievement in Zimbabwean secondary schools.

Secondary aims were to:
- Conceptually analyse the term emotional self-concept as well as to determine its relationship with academic achievement;
- Examine the relative contributions of emotional self-concept to academic achievement; and
- Examine the relationship between learner emotional self-concept and academic achievement by gender, grade/form, school location and type, type of attendance and age.

Below are specific research problems/hypotheses that emanated from the review of literature on similar topics to test the relationship between learner emotional self-concept and academic achievement in Zimbabwe secondary schools.

**Hypotheses/research questions**
For the purposes of statistical analysis, the null-hypotheses were tested for significance of the relationship between learner emotional self-concept and academic achievement at the 1% or 5% significance levels, using the Pearson’s Correlation Coefficient ($r$). The null- and alternate hypotheses for this study were presented (See Results Section):

**Significance of the study**
The study has important implications for educators, parents, policy makers, school managers and educational psychologists in the way they treat children and organize learning environments. The study highlighted the role of personality factor, emotional self-concept in learning and academic achievement thereby enhance educators’ understanding of how learners experienced learning tasks, classroom and school environments and the consequences on academic achievement. The study created awareness among educators that improving academic skills alone was not enough to improve performance in school but personality factor, emotional self-concept (*belief system*) too, since they had a reciprocal relationship. Finally, the study opened more opportunities for research on emotional self-concept and academic achievement.

In view of the above background, rationale and literature review, the study investigated the relationship between learner emotional self-concept and academic achievement of adolescents in secondary schools. It was predicted that emotional self-concept would correlate positively and significantly with academic achievement and that variables such as gender, grade/form, age, school location, school type and type of attendance mediated positively and significantly with emotional self-concept and academic achievement.

**METHODOLOGY**

**Research design**
The aim of the study was to describe learner emotional self-concepts and to determine the relationship between learner emotional self-concepts and academic achievement of adolescents in Zimbabwe secondary schools. It was therefore decided to use the traditional quantitative methodology of measuring the relationships by means of statistical correlations. The cross-sectional survey research design was used as a means of exploring and evaluating emotional self-concepts and academic achievement of learners in different school types and locations. The study was cross-sectional because learners who differed in academic ability, age, school type and location attended, gender, type of attendance and grade/form were sampled for the study. They shared the common characteristics of being adolescents attending secondary schools, and variables mentioned above. The research design allowed for description and correlation of data on emotional self-concepts, and determination of the relationship between learner emotional self-concepts and academic achievement at a point in time. The research design allowed data collection from a larger number of learners than would be generally possible with experimental or quasi-experimental research designs. Relationships
between variables such as self-concept and academic achievement were determined with the help of Pearson’s Product Moment Correlation Coefficient (r) without suggesting causation. (Dancey, and Reidy, 2004). A Self-Description Inventory Questionnaire (SDIQ) (See Appendix A) adapted from Marsh’s Self Description Questionnaire (SDIQ) (Marsh, 1990) was used to collect data from individual self-reports of the learners’ knowledge, attitudes or behaviours in learning situations. In addition, correlation of emotional self-concepts and academic achievement on the basis of the following moderator variables: age, gender, grade/form (junior/middle), school location (urban/rural), school type (government/non-government) attended, and type of attendance (day/boarder) was also determined. Focus group discussions with learners of different levels of academic ability were also held to collect rich data on their perceptions about emotional self-concepts in academic situations.

Participants
Participants were 1281 above- and below average secondary school learners (junior: Forms 1 and 2: 52.5% and middle: Forms 3 and 4: 47.5%); (male: 48.9% and female: 51.0%) participated in the study. The average age of the participants was 14.5 years, with the youngest aged 13 years and the oldest 16 years plus. Participants were drawn from ten purposely-selected schools to represent the wide range of secondary schools by type (government: 68.9% and non-government: 31.1%), location (urban: 57.6% and rural: 41.4%), type of attendance (boarding: 24.5%; day: 74.2%). Responses were used to test hypotheses as listed above. School mid-year examination results in compulsory subjects (English, mathematics, an indigenous language (Ndebele or Shona), science and history) were used as measures of academic achievement.

Self-Description Inventory Questionnaire (SDIQ) and Measures
The questionnaire comprised 25 questions divided into two sections (Biographical and emotional self-concept scale). Questions appear on Appendix A. Responses were recorded on the response sheet, Appendix B. The first section of six questions (1-6) focused on biographical data namely, gender, form/grade, age, school location, school type and type of attendance.

The second section comprised 25 questions on emotional self-concept with a reliability coefficient of 0.80. Questions required respondents to rate themselves on emotional anxiety, depression and happiness (e.g. “I become anxious towards exam time”, “Low marks generally depress me”). Responses to questions were on a five point Likert rating scale ranging from Definitely Disagree (1), Disagree (2), Uncertain (3), Agree (4) and Definitely Agree (5).

Content and face validity
Content and face validity were addressed using the judgement of an established researcher knowledgeable on the whole issue of self-concept. Reliability of the questionnaire was determined by a Cronbach Alpha correlation coefficient. Cronbach Alpha is a measure of internal consistency (reliability) of what questions are meant to measure or describe, in this case self-concept domains. Coefficient was within the acceptable range of 0.65 to 0.90 for personality attributes such as emotional self-concept. (McMillan and Schumacher, 1993).

Ethical issues
Permission to administer the questionnaire was sought from the Ministry of Education, Sport, Culture and Arts’ Head Office, regional offices and heads of schools and parents. Individual participants were told that participation was optional. The purpose of the study was explained.

Procedure
Twenty above-and below average learners were selected at each school respectively. For mixed ability classes, the top twenty and bottom twenty were selected for the study. School records were used to identify the level of ability of the learners. Participants were given two sheets of paper, one containing the questions (Appendix A) and the other, the answer sheet (Appendix B). Each participant was asked to indicate their response to each question by writing down a number in the box corresponding to the chosen response on the answer sheet, Appendix B. Participants were asked to respond to emotional self-concept questions expressing how they felt about themselves and their academic achievement in school as a whole. Participants were asked to answer every question as truthfully as possible. Instructions on how to complete the questionnaire were also read out to the participants to ensure that there was no misinterpretation of what they were expected to do. Questions raised were answered to clarify any concerns. All the questionnaires and answer sheets were collected at the end of the exercise. The questionnaire was self-administered and took between 5 to 10 minutes to complete. Participants were thanked for their co-operation and participation.

RESULTS
The biographical data of respondents
A total of 1281 junior (Form 1 and 2) and (Form 3 and 4) secondary school male and female learners participated in the study. Details of the sample are given in table 1.

The average age was about 14.5 years with the youngest being 13 years and the oldest 16 years plus.
Participants were drawn from ten purposely selected schools to represent the wide range of secondary schools by type (government and non-government), location (urban/rural), and type of attendance (boarding/day) and level of performance in public examinations (high/low). Of these six were from Greater Harare urban and four from Mashonaland East Region which is predominantly rural. There were five Government and five Non-government schools. Of the Government schools, ‘A’ schools were situated in low density suburbs, ‘B’ in high density suburbs and ‘C’ in rural areas. Two of the Government urban schools offered boarding and day school places while one was entirely day. Both rural Government schools were day schools only.

Three of the Non-government schools were situated in the urban areas and the other two were boarding schools in rural areas. Boarding schools recruited learners from all over the country unlike day schools which enrolled learners from the surrounding areas only. Among the participating schools were those at the top of the school league tables on the national ‘O’ level examination.

Results. From each school, high and low performers participated according to the information supplied by the schools. Both juniors and middle learners were included in the sample. The sample was deemed to be representative of the Zimbabwe school population. Responses were used to answer research questions/problems and to test hypotheses 1 to 7 of the current study presented in the sections that follow.

Research problem 1

$H_0$: Is there a significant correlation between emotional self-concept and academic achievement?

$H_{01}$ There is no significant correlation between emotional self-concept and academic achievement.

The emotional self-concept and moderator variables were presented.

Pearson’s correlation coefficient was used to test this hypothesis. The results appear in table 2.

Table 2 shows that the emotional self-concept was significantly and positively correlated with the academic achievement of adolescent learners suggesting that the level as well as the quality of learners’ emotions enabled prediction of their level of academic achievement. The null-hypothesis was therefore rejected at the 5%-level of significance. It is however, important to note that the correlation was relatively low ($r=0.065$).

Research problem 2

$H_0$: Is there a significant correlation between emotional self-concept and academic achievement of both genders?

$H_{02}$ There is no significant correlation between emotional self-concept and academic achievement of both genders separately.

Correlations were calculated and the results are presented in table 3.

Results in table 3 showed that gender accounted for positive and significant correlation with emotional self-concept but not academic achievement. The null hypothesis was therefore rejected for gender and emotional self-concept at the 1% significant level but could not be rejected for the academic achievement at the same level. The lack of significance of the relationship with academic achievement was consistent with other studies which found no significant difference in academic performance between men and women. This meant that male and female learners responded

Table 1: Biographical data of adolescents (N=1281)

<table>
<thead>
<tr>
<th>Group</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>627</td>
<td>48.9</td>
</tr>
<tr>
<td>Female</td>
<td>653</td>
<td>51.0</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>1281</td>
<td>100</td>
</tr>
<tr>
<td><strong>Form/Grade</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior (Forms 1and2)</td>
<td>673</td>
<td>52.5</td>
</tr>
<tr>
<td>Middle (Forms 3and4)</td>
<td>608</td>
<td>47.5</td>
</tr>
<tr>
<td>Total</td>
<td>1281</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Location of School</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>738</td>
<td>57.6</td>
</tr>
<tr>
<td>Rural</td>
<td>530</td>
<td>41.4</td>
</tr>
<tr>
<td>Missing</td>
<td>13</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>1281</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 years</td>
<td>159</td>
<td>12.4</td>
</tr>
<tr>
<td>14 years</td>
<td>332</td>
<td>25.9</td>
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<tr>
<td>15 years</td>
<td>313</td>
<td>24.4</td>
</tr>
<tr>
<td>16 years</td>
<td>298</td>
<td>23.3</td>
</tr>
<tr>
<td>over 16 years</td>
<td>179</td>
<td>14.0</td>
</tr>
<tr>
<td>Total</td>
<td>1281</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>School Type</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government A</td>
<td>302</td>
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</tr>
<tr>
<td>Government B</td>
<td>258</td>
<td>20.1</td>
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<tr>
<td>Government C</td>
<td>321</td>
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<tr>
<td>Non-Government</td>
<td>396</td>
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<td>Missing</td>
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<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>1281</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Type of Attendance</strong></td>
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<tr>
<td>Boarder</td>
<td>314</td>
<td>24.5</td>
</tr>
<tr>
<td>Day Scholar</td>
<td>951</td>
<td>74.2</td>
</tr>
<tr>
<td>Missing</td>
<td>16</td>
<td>1.2</td>
</tr>
<tr>
<td>Total</td>
<td>1281</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 3: Correlations between emotional self-concept and academic achievement of male (N=627) and female (N=653) learners.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Correlation with Achievement</th>
<th>Emotional self-concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>1</td>
<td>.367**</td>
</tr>
<tr>
<td>Emotional</td>
<td>.060</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>1</td>
<td>.454**</td>
</tr>
<tr>
<td>Emotional</td>
<td>.070</td>
<td>1</td>
</tr>
</tbody>
</table>

** = correlation is significant (p<0.01)

Table 4: Correlations between emotional self-concepts and academic achievement of junior (N=673) and middle (608) learners.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Correlation with Achievement</th>
<th>Emotional self-concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>1</td>
<td>.089**</td>
</tr>
<tr>
<td>Emotional</td>
<td>.089**</td>
<td>1</td>
</tr>
<tr>
<td>Middle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>1</td>
<td>.022*</td>
</tr>
<tr>
<td>Emotional</td>
<td>.022*</td>
<td>1</td>
</tr>
</tbody>
</table>

** = Correlation is significant at the 0.01 level (p<0.01)
* = Correlation is significant at the level 0.05 (p<0.05)

Table 5: Correlations between emotional self-concepts and academic achievement of urban (N=738) and rural (N=530) learners.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Correlation with Achievement</th>
<th>Emotional self-concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>1</td>
<td>.071**</td>
</tr>
<tr>
<td>Emotional</td>
<td>.071**</td>
<td>1</td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>1</td>
<td>.062*</td>
</tr>
<tr>
<td>Emotional</td>
<td>.062*</td>
<td>1</td>
</tr>
</tbody>
</table>

** = Correlation is significant at the 0.01 level (p<0.01)
* = Correlation is significant at the level 0.05 (p<0.05)

differently in learning situations or learning tasks hence gender correlated significantly with emotional self-concept.

Research problem 3
Is there a significant correlation between emotional self-concept and academic achievement of junior and middle learners?

H$_{03}$ there is no significant correlation between emotional self-concepts and academic achievement of junior and middle learners.

The results are presented in table 4.

The results in table 4 show that there was a significant and positive correlation between the emotional self-concepts and academic achievement of junior learners and not for the middle learners. Consequently, the null-hypothesis was rejected at the 5%-level for the emotional self-concepts and academic achievement of junior learners only.

Research problem 4
Is there a significant correlation between emotional self-concepts and academic achievement of urban and rural learners?

H$_{04}$ There is no correlation between emotional self-concepts and academic achievement of urban and rural learners.

This hypothesis was tested statistically. The results appear in table 5.

According to table 5, the correlations between the emotional self-concepts and academic achievement of urban and rural learners were not statistically significant.
though positive. The urban learners recorded relatively higher correlations than the rural learners suggesting a possible stronger emotional self-concept influence on the learners’ academic achievement. The null-hypothesis was not rejected for both the urban and the rural learners.

**Research problem 5**
Is there a significant correlation between emotional self-concepts and academic achievement of learners from different school types?

$H_{05}$: There is no significant correlation between emotional self-concepts and academic achievement of learners from different school types.

The results after testing this hypothesis are presented in Table 6.

Table 6 indicates that the emotional self-concept was significantly and positively correlated with academic achievement of learners in Government A and non-government schools. The null-hypothesis was rejected on the 1%–or the 5%-level of significance.

For Government B and C schools correlations were not statistically significant though positive. Overall the results indicated significant correlations between the learners' academic achievement and: emotional self-concepts of learners in Government A and non-government schools.

The results indicated that the type of school one attended might influence emotional self-concept and academic achievement in some way.

**Research problem 6**
Is there a significant correlation between emotional self-concept and academic achievement of boarders and day scholars?

$H_{06}$: There is no significant correlation between emotional self-concept and academic achievement of boarders and day scholars.

A two-tailed Pearson’s Correlation Coefficient test was administered and the results are shown in Table 7.

The results showed that the emotional self-concept was significantly and positively correlated with the academic achievement of boarders and day scholars. The correlation coefficient was higher for the boarders suggesting a better learning environment than for the day scholars. The null-hypothesis was rejected at the 1%-level of
Table 8: Correlations between emotional self-concept and achievement of learners of different ages (N=1281)

<table>
<thead>
<tr>
<th>Factors</th>
<th>Correlation with Achievement</th>
<th>Emotional self-concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 Years (N=159)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>1</td>
<td>.051</td>
</tr>
<tr>
<td>Emotional</td>
<td>.051</td>
<td>1</td>
</tr>
<tr>
<td>14 Years (N=332)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>1</td>
<td>.133*</td>
</tr>
<tr>
<td>Emotional</td>
<td>.133*</td>
<td>1</td>
</tr>
<tr>
<td>15 Years (N=313)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>1</td>
<td>-.019</td>
</tr>
<tr>
<td>Emotional</td>
<td>-.019</td>
<td>1</td>
</tr>
<tr>
<td>16 Years (N=298)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>1</td>
<td>.038</td>
</tr>
<tr>
<td>Emotional</td>
<td>.038</td>
<td>1</td>
</tr>
<tr>
<td>Older than 16 (N=179)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>1</td>
<td>.080</td>
</tr>
<tr>
<td>Emotional</td>
<td>.080</td>
<td>1</td>
</tr>
</tbody>
</table>

** = Correlation is significant at the 0.01 level (p<0.01)
*  = Correlation is significant at the level 0.05 (p<0.05)

Research problem 7

H0: Is there a significant correlation between emotional self-concept and academic achievement of learners of different ages?

H1: There is no significant correlation between emotional self-concepts and academic achievement of learners of different ages.

Results of a two-tailed Pearson’s correlation test are given in table 8.

All except the 14 year old age group had no significant correlation between emotional self-concept and academic achievement. The null-hypothesis was therefore rejected at the 5%-level of significance for the 14 year age group but could not be rejected for the rest.

For learners aged 14 years, there was a significant and positive correlation between academic achievement and the emotional self-concept.

It is important to note that the emotional self-concept was negatively correlated with the academic achievement of the 15 year old learners. The latter seemed to suggest that an increase in one would result in the decline of the other. For example, as adolescents, emotional instability, attempts to dissociate with adults in preference for peers, deprives the young people of parental guidance with regard to school work and behaviour in general. Less focus on school work may lead to lower academic performance hence the negative relationship.

According to table 8, there was no significant correlation between the emotional self-concept and the academic achievement of learners aged above 16 years. Consequently, the null-hypothesis was not rejected for this age group.

DISCUSSION

Emotional self-concept and academic achievements

The purpose of the study was to investigate the relationship between learner emotional self-concept and academic achievement in Zimbabwe secondary schools, and to examine the contribution of moderator variables: gender, standard (form/grade), age, school type and location and type of attendance differences with regard to the emotional self-concepts and academic achievements. The study also examined the relative contributions of emotional self-concept to academic achievement. The quantitative and qualitative evidence was used for the study.

Results from the investigation indicated that changes in emotional self-concept might have a corresponding influence on the academic achievement of adolescent learners (table 2). In other words, the learners’ general feeling of academic competence and confidence overall and in specific subjects or learning situations, impression about the school as supportive of their academic endeavours or otherwise, emotional feelings and abilities may influence the way adolescents performed in school. The correlation was however, very low (r=0.065) implying a possibly weak emotional influence on scholastic achievement on its own. The literature supported the results of the study (Hamachek, 1995:420; Marsh, 1992:35; Wiest et al, 1998). Both the qualitative and quantitative evidence showed that the results were meaningful and significant respectively.
Overall results confirmed earlier results on the role of emotions in learning and academic achievement of the sample of secondary school learners in Zimbabwe considered in the study. For example, when emotions were high and positive, learners performed better and poorly when they were low or negative. Similarly, their orientation towards school and level of motivation appeared to be influenced by learners’ emotions about the self and the learning environment. Results supported earlier studies by Brogan (1998), Wiest, Wong and Kreil (1998). The relative role played by the moderator variables was also considered.

**Emotional self-concept, academic achievement and gender**
Statistical results showed significant gender relationship with the emotional self-concept of adolescent learners but not academic achievement. This meant that gender may have had some influence on the way learners felt about learning situations or environments but did not affect their performance overall. However, qualitative evidence showed that learners experienced feelings of joy, excitement and satisfaction when they were successful, and embarrassment and depression when they failed. Depression and anxiety were reported as affecting academic achievement negatively. These results supported findings by Dembo (1994:168); Brogan (1998:3), who reported that depression and high levels of anxiety interfered with learning and academic achievement. Implications of the results are that educators and others involved in education should strive to maintain a positive learning environment as well as ensuring learners experienced success more frequently.

**Emotional self-concepts, academic achievement and grade or form**
Emotional self-concept was positively and significantly related to the academic performance of junior learners only. The results seemed to suggest that the way junior learners reacted to the emotional relations and feedback to their academic activities may have had some influence on their performance in school. Basing on these results, it would appear that the changes the junior learners experienced during transition from the primary school to the secondary school may have had a significant influence on the way they perceived their emotional selves. They came face to face with new social relations, academic environment with different curriculum, and educators for each subject. Being young, they were more vulnerable to various influences, and still developing at a greater speed than the older learners. These changes may have influenced all aspects of the young adolescents’ lives which in turn influenced their academic achievement. Any negative experiences may therefore, slow down the junior learners’ adjustment to the new environment leading to negative effects on their learning and academic achievement.

Later, middle learners appeared to be more stable and relied more on intrinsic than extrinsic motivation for their learning and achievement. This was demonstrated by weaker correlations which did not reach statistically significant levels. From the above it would seem that age may have some influence on academic achievement and emotional self-concept. The results demonstrated that the relationship between emotional self-concept and grade or form was inconsistent and could not be generalised. Since achievement measures used were from school records and not standardised external assessment, the usual weaknesses of educator made tests may have influenced the results. A similar study using standardised scores or grades and a larger sample could be the subject of another investigation.

**Emotional self-concept and academic achievement of rural and urban learners**
There was no statistically significant relationship between rural and urban learners’ emotional self-concepts and their academic achievement. Results implied that school location may have had no significant influence on either learners’ emotional self-concept or academic achievement. The results could be explained by the fact that the sample of learners in both school locations comprised high performing learners at boarding schools located in rural areas. The majority of the learners at boarding schools ordinarily lived in urban areas hence similarity in emotional self-concepts. A study with a sample comprising urban and rural day learners (excluding high performing and selective boarding schools) could have been more revealing on the relationship between emotional self-concepts and academic achievement for the two locations. This is yet another piece of new knowledge since no previous study had been carried out to investigate the relationship between emotional self-concept and academic achievement.

**Emotional self-concepts, academic achievement of learners in different school types**
Literature and empirical evidence have shown that the school one attended, whether it was high or low achieving, played a significant role in shaping the learners’ emotional self-concepts and their academic achievement (Dembo, 1994).

During interviews learners in Government B schools and Non-government schools were quite open in expressing their dissatisfaction and satisfaction because they provided poor and supportive learning environments respectively. This was further supported by statistical
evidence which showed significant and positive relationship between emotional self-concept and academic achievement of adolescent learners. Government B and C schools showed no significant correlation between emotional self-concept and academic achievement. Literature has indicated that positive emotions promoted effort and better performance (Nakamura and Seligman in Fontana, 1997:34). Results of the current study supported earlier research.

The results demonstrated that the relationship between learner emotional self-concept and academic achievement was inconsistent and could not be generalised. More research needs to be done with a larger sample to be more conclusive about the relationship between the emotional self-concept and academic achievement of learners in different school types.

**Emotional self-concept, academic achievement and learners of different ages**

The literature and empirical evidence have shown that the relationship between emotional self-concept and academic achievement declined with age. For the 13 and 14 year olds, and for the 14 year olds, the emotional self-concepts also correlated significantly with achievement suggesting possible complementary influence. For the academic achievement, correlations with the emotional self-concepts were quite significant.

As learners grew older a decline in emotional self-concept was experienced. The results supported earlier findings by Nicolls (in Dembo, 1994); Huitt, (1998), but contradicted Ezeilo (in Mboya, 1999) who, in a study in Nigeria reported an increase of emotional self-concept with age. Regardless of age, feelings about academic competence were described as having an influence on the learners' emotional self-concept and achievement.

Emotional self-concept was negatively correlated to academic achievement for the 15 year olds. This is the age when adolescents experience physical, physiological, emotional and psychological changes in their bodies (Mostert, 1998). This impacted on their behaviour as a whole and emotional self-concept as well. Literature has already indicated that an increase in the intensity of emotions often tended to interfere with learning and lowered academic achievement. From the interview results it was reported that depression had a negative influence on academic achievement. Results might be a true reflection of this age group as well.

Association with significant others may be very low, hence little or no effect on their self-concept. Self-concept derives from interaction with significant others and the environment. This might explain the lack of significant correlation between emotional self-concept and academic achievement for those aged above 16 years.

Overall, the results of the current study showed that age might have some influence on the emotional self-concept and academic achievement though the evidence is weak. The correlation between emotional self-concept and academic achievement was inconsistent hence it could not be generalised. More research is needed with a larger sample.

**Emotional self-concept, academic achievement of boarders and day scholars**

The study showed significant and positive relationship between the academic achievement and emotional self-concept of both day scholars and boarders. Results implied that the type of attendance, as a boarder or day scholar may have some influence on shaping the emotional self-concepts of the adolescent learners. Since average correlation coefficient and mean marks were higher for boarders (selected on basis of high academic performance), it can be safely concluded that boarding schools offered better conditions for shaping the learners' emotional self-concepts leading to better academic achievement and vice versa. (Dembo, 1994). Type of attendance as a boarder or day scholar had a significant impact on the emotional self-concepts too. From this study it was therefore concluded that the type of attendance mattered in shaping both emotional self-concept development and academic achievement of adolescent learners.

**Results of the qualitative interviews**

**Emotional self-concept and academic achievement**

Respondents were asked to express their feelings about their academic achievement in their current school, when they experienced success or failure, anxiety and depression. Responses to the questions revealed the learners' emotional self-concepts in academic situations. Overall success brought about excitement and joy while failure caused depression and feeling of hopelessness. The latter two tended to lower the self-concept of the learners and academic performance as well. Anxiety and depression interfered with learning and achievement as a whole. Details of the learners' responses are presented below.

**Satisfaction with school environment**

Respondents in Non-government schools expressed satisfaction with their current schools describing them as providing a favourable learning environment that promoted high academic achievement. Examples of observations include: "I think our environment sort of stimulates my results to higher levels." "I think being at this school puts me on the road to success because there is an environment of studying and so you will always be
Failure can cause depression for some learners. Depression was described as interfering with one's orientation and academic performance in general. For example, “When I fail, I feel depressed because of the effort I put in and it's very difficult to start to work hard to improve my mark;” "You cannot concentrate when you are depressed." "Ha-a! It (depression) affects my performance because I will be feeling very bored and would not want to learn that day because my thinking capacity will be tired." “Depression does really affect your performance. Let's say in mathematics there are long division sums, I doubt if you can work correctly whilst something is troubling you.” In other words failure undermined the learners’ confidence which would affect academic achievement negatively.

Feelings of anxiety
Anxiety was described as common among middle learners when examinations were approaching. Because of the importance of the examinations to the learners' future, there was a tendency to panic, especially when preparation was not thorough. Feelings of anxiety tended to lower the level of performance. Some comments are: “When examination time approaches, you feel a bit scared and uneasy;” "you really feel anxious because like the Form fours, they are making up their future so you feel restless and uneasy;” “...getting into the examination room you panic and write the wrong answers and yet you know the correct answer;” "If you are prepared for the examinations, there is nothing to be afraid of …you will do well."

CONCLUSION
Conclusions regarding the relationship between emotional self-concept and academic achievement were as follows:
Both the qualitative and quantitative evidence have shown that the way learners performed in academic settings may have something to do with their emotional self-concepts and that the relationship was reciprocal. The learning environment learners operated from appeared to influence their performance for better or worse. Negative emotions influenced learning negatively and vice versa. In view of the results, it was recommended that actions or experiences that caused high emotions be minimised or avoided altogether. Creating a positive learning and home environment where success was experienced and recognised more frequently, performance and effort were appreciated, and learners made to feel confident and happy in whatever they did should be the goal of every parent and educator.

Recommendations
In the light of the research methodology used, and the study's subsequent findings, the following
recommendations were made:
Further research should be undertaken in the area of emotional self-concept and academic achievement in individual subjects in order to establish the learners' emotional self-concepts in relation to their levels of achievement. Longitudinal and intervention studies involving testing the learners in schools in order to determine causation can be carried out. Since this was the first exploratory study on emotional self-concept and academic achievement in Zimbabwe, replication studies can be carried out focusing on moderator variables: gender, form/grade, age, school type and location, and type of attendance for the relationship between, emotional self-concept and academic achievement.

Limitations
Although the present study provided support to several theoretical propositions about the relationship between the emotional self-concept and academic achievement, certain limitations should be noted. For example, absence of randomisation in preference of purposive sampling, use of school based test scores instead of standardised scores, use of global emotional factors instead of specific variables and that the study investigated correlations and not causation. The study had practical implications for educators, learners, school administrators and parents in how to interact with learners in different contexts and creating conducive learning environments.

Despite the limitations outlined above, the outcomes of this study offered a reasonable basis to believe that emotional self-concept played a significant role in the academic achievement of adolescent learners, and that the role of moderator variables gender, grade/form, age, school location, type and type of attendance in Zimbabwe secondary schools cannot be generalised. The study offered further opportunities for exploratory and longitudinal studies on the nature of influence of emotional self-concept domain on academic achievement.

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