

The Correlation Between Learning Blockages and Scholastic Achievement

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A learning blockages questionnaire, initially designed and used to assess tertiary students, was adapted for high school learners. Seventy learners participated in this research project and their responses to the adapted questionnaire were correlated with their scholastic achievement. The data was analysed and the results showed a significant correlation between learning blockages and scholastic achievement, especially on the dimensions pertaining to learning skills, fear about learning and learning from others. It is recommended that more learners be made aware of learning blockages and that these blockages are subsequently addressed through appropriate interventions.

This initiative originated as a result of the perceived disparity in academic content between grade 7 and grade 8; a gap that many learners in South Africa experience as having a negative influence on their scholastic achievement. This negative influence can have far reaching effects on learners' careers and general lives. According to Cordoni (1990), Bauer, Keefe and Shea (2001) and Mash and Wolfe (2005), learning difficulties and the emotional and social problems that often accompany these difficulties may develop into limited opportunities for intellectual, emotional and social success in adulthood (Theron, 2006).

In their qualitative study into factors associated with poor performance by high school learners, Makgato and Mji (2006:8) cite a learner as saying '*I sometimes wonder why the teacher talks about things done last year instead of teaching it now*'...and another learner

said: '*we are memorizing, we don't understand*'.

The aforementioned remarks by struggling learners are indicative of learning blockages or perceived obstacles in learners' endeavour to succeed. It seems as though there are no conclusive scientific solutions in existing literature to assist these learners. There is, however, a contribution by von Hirschfeld (1993) that shed some light on possible reasons for unsatisfactory academic achievement. In her survey of a sample of 2nd year university engineering students, von Hirschfeld (1993) used a Learning Blockages Questionnaire (LBQ) to ascertain possible reasons for their low pass rate. Results from von Hirschfeld's (1993) survey showed that there is a significant correlation between the presence of 'Learning Blockages' and the high rate of failure. On a more positive note, however, the 'Learning Blockages' that were defined in this

questionnaire are problems that can be successfully addressed through intervention. Bearing this in mind, the Learning Blockages Questionnaire was adapted for secondary school learners so that research into the possible influence of 'Learning Blockages' on pass rate in South African schools can be initiated, and so that the necessary intervention(s) to assist struggling learners can be implemented.

Although existing literature does not seem to address learning blockages as defined in the LBQ, an electronic search provided many scientific publications on poor performance by high school learners in South Africa, which proves that there is a problem that needs to be addressed. An abundance of research was done including the effect of language proficiency (Cross, 2002), reading ability (Pretorius, 2002), problems of learners, teaching staff and school management (Ogunbanjo, 2001), and many more. Problems of learners as defined by the dimensions of the LBQ could, however, not be found in this literature search.

LBQ Dimensions Defined

The initial Learning Blockages Questionnaire contained 200 statements derived from learning skills courses, critical incident interviews and literature searches. Finally, after refinements and trials, the questionnaire contained 80 items. These 80 items were grouped into four dimensions or categories of learning blockages, namely learning skills, distractions/concentration, worries and fears about learning and learning from others. The aforementioned 80 items relating to the four dimensions were edited and the final questionnaire included 56 items applicable to high school learners.

- Learning Skills

Von Hirschfeld, Downs and Levy (1993), cite Downs and Perry's (1987) definition of learning skills, as 'internalised processes by which, for example, a person memorises facts or understands concepts. Learning skills, as with all skills, can be learned and improved with practice. Research has found that more effective learners use a broader range of learning skills and choose learning skills appropriate to the subject. Conversely, those who are less effective learners have fewer learning skills and of these, some are inappropriately used. The questionnaire assesses the respondent's view both of their overall *range* of learning skills as well as the *appropriateness* of these learning skills for learning different things. Other questions assess the extent to which the person relies on learning *sources or media* – e.g. courses, books, lessons (as opposed to learning *skills*), and passive approaches to learning such as "show me" or "tell me" '

- Distractions/Concentration

These questions refer to the perceived ability/lack of ability to remain focussed in class and while studying.

- Worries and Fears about Learning

These questions refer to perceived anxiety, nervousness, fear of being shamed, and perceived negative self-esteem about academic success.

- Learning from Others

This dimension covers questions relating to perceived environmental influences including the appraisal of academic content, teachers and lecturers, and didactics. According to S D von Hirschfeld (personal communication, May 2012), 'effective learners are

able to learn from a wide variety of sources and people, and make the best use of resources, even learning despite the quality, perceived or otherwise, of teachers and trainers. Above all, they have a fundamental belief that they, as learners, are responsible for both the process and outcome of learning, not teachers and trainers’.

Scholastic Achievement Defined

For the purpose of this research project, scholastic achievement is defined as the average marks that the respondents achieved, expressed as a percentage.

This research hypothesises that there is a correlation between the aforementioned learning blockages and scholastic achievement.

Seventy-three Grade 9 learners from a participating high school voluntarily completed the 56-item questionnaire. The responses of two learners were spoilt, and one learner’s academic achievement was not available, with the result that the final statistical analysis incorporated the responses of 70 learners. This may seem a rather small sample, but according to Cohen (1988), a sample of 68 respondents is sufficient when considering effect size of .05 and statistical power of .80 for a correlation study.

Learners responded to the items electronically. A five-point Likert Scale was used to facilitate scoring, ranging from ‘strongly agree’ to ‘strongly disagree’.

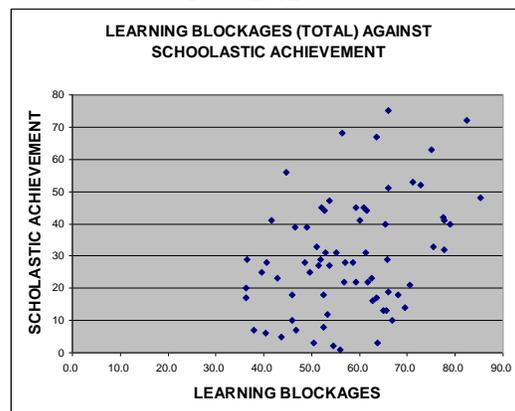
As far as ethical considerations are concerned, learners were encouraged to participate in the research, with the assurance that their participation is voluntary, that their participation/non-participation will not be disclosed, and that their responses will be managed with confidentiality.

Data Analysis

The raw data of each learner was divided into the four dimensions, so that each dimension could also be correlated with each learner’s scholastic achievement. Excel was used to process the data and the following analyses were carried out:

- A correlation between learning blockages and scholastic achievement for the total sample (Table 1);
- A correlation with regard to gender between learning blockages and scholastic achievement (Table 2);
- A correlation of each of the four dimensions of learning blockages with scholastic achievement (Table 3);
- The mean percentage score of the dimensions and the total score of learning blockages (Table 4).

TABLE 1
CORRELATION BETWEEN LEARNING
BLOCKAGES AND SCHOLASTIC
ACHIEVEMENT
Pearson Correlation Coefficient, $r = 0.37042$
 $r^2 = 0.1372$



**TABLE 2
CORRELATIONS WITH REGARD TO
GENDER**

Gender	Number	Correlation
Female	39	r = 0.4110
Male	31	r = 0.2848

**TABLE 3
CORRELATIONS WITH REGARD TO
THE DIMENSIONS OF LEARNING
BLOCKAGES**

DIMENSION	r
1. Learning skills	0.3889
2. Distractions	0.1222
3. Worries and fears	0.3227
4. Learning from others	0.3202
TOTAL	0.3704

**TABLE 4
MEAN % SCORES OF DIMENSIONS AND
TOTAL OF LEARNING BLOCKAGES**

Dimension 1 : Learning skills	27.50%
Dimension 2 : Distractions	24.55%
Dimension 3 : Worries and fears	29.07%
Dimension 4 : Learning from others	29.07%
Total	26.56%

Conclusions

Table 1 indicates that there is a significant positive correlation between learning blockages and scholastic achievement for this sample of respondents. Although this correlation is not very strong, it clearly shows that learners with fewer learning blockages achieve better marks at school.

The correlations regarding the different dimensions and scholastic achievement show that learners with fewer 'learning skills', fewer 'worries and fears about learning' and fewer problems regarding 'learning from others' have better marks, whereas in the case of distraction /concentration' there is a very weak correlation (Table 2).

In the case of female learners for this sample, the correlation is better than in the case of males, the latter correlation being rather weak. Therefore, as far as the difference between male and female respondents in this sample is concerned, the learning blockages score does not seem to be the conclusive element that affects the male respondents' scholastic achievement.

Table 4 shows that the average scores for the dimensions 'distractions' and 'learning from others' are lower than those for 'learning skills' and 'worries and fears'.

Limitations and Recommendations

The correlation coefficients are not very high, and this may be seen as a limitation. However, it is recommended that the Learning Blockages Questionnaire (as revised for high school learners), be used as a tool to create an awareness among struggling learners that these blockages are real, that proper intervention can bring about positive change and that there are products and people out there who can assist them in addressing this distressing situation. Whereas it seems as though the jury is still out on the concept, definition and execution of the mixed method of research (Creswell and Garrett, 2008), it is recommended that researchers who consider studies into the prevalence of learning blockages include both quantitative and qualitative methods. Conclusions drawn from quantitative research evaluated in combination with responses to qualitative, structured, open-ended questions may not only enhance our understanding of learning blockages, but may also inform future development of intervention programmes and strategies.

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