

## **CHAPTER V**

### **DISCUSSIONS, CONCLUSIONS ND IMPLICATIONS**

#### **Introduction**

This study was done to determine the orientation of the locus of control among year six pupils of a rural school by using the IAR (Intellectual Achievement Responsibility) scale. The results were then used to correlate to the achievement in year five-science examination.

#### **Locus of control and gender**

In this study, 42.9% of the students were found to be internals and 57.1% of the students were found to be externals. This shows that more students tend to be externally oriented. Only 53.8% of the boys were found to be internals in comparison to 60% of the girls. This shows that students are inclined to be externally oriented irrespective of gender. This means that they tend to belief that whatever happens to them is beyond their control and is controlled by external factors such as luck or fate.

Students who were found to be internals had low score. The mean value of the IAR score for the sample was only 17.82. The mean value of the IAR score for boys was only 17.46 and for the girls, 18.13. This value is low compared to the mean value



obtained by Crandall (1965). The study, which was done on year 3 to year 12 pupils using the IAR scale, a mean value of 26.94-27.30 was obtained for boys and a value of 24.74-25.38 was obtained for girls.

This value is also low compared to the mean value obtained by Jamallulail (1990) using the IAR scale on form 4 students in Selangor. A mean value of 25.80 was obtained for girls and 24.10 for boys.

This implies that the orientation towards the internal locus of control is not very stable. The inclination towards the internal locus of control is only moderate. They were prone to believe that external factors tend to affect their academic achievement, particularly in science.

The Chi square analysis shows that there's no significant difference in the orientation of the locus of control between the boys and girls of year six in this study. This finding is similar to that obtained by Blue (1986) and Crandall (1965) who found no significant difference in the orientation of the locus of control between the boys and girls.

The similarity in the orientation of the locus of control shows the similarity in the attitude and level of motivation irrespective of gender. The difference in traditional roles expected of them, good health and systematic guidance from parents, which are factors contributing towards the internal locus of control (Phrase, 1976), may be non-existent. This indicates that boys and girls are treated the same way. Society does not expect only the boys to excel in education and life on the whole. Both boys and girls are given equal opportunity and competition exists between them.



### Locus of control and achievement in science.

In this study, the chi square analysis based on the locus of control and achievement in science proves to be non-significant. This means that the orientation of the locus of control is not a factor affecting the achievement in science of year six students. This finding is similar to that obtained by Lamar (1986) who found that high academic achievement does not depend on the orientation of the locus of control.

However, it is contradictory to many of the studies which proved that students with internal locus of control obtained better grades academically (Bar-Tal, 1980; Maqsud, 1983; Maznah and Ng, 1985; Maznah, 1988). Maznah and Ng (1985), who did a study on year three students using the IAR scale, found that students who were internals achieved better in Bahasa Malaysia, English and Mathematics.

This result implies that there may be other factors affecting students' achievement in science. These include factors such as socio-economic background, teaching methods, school environment and laboratory facilities.

### Implications of the study

In this study, the data analysis shows that the IAR (Intellectual Achievement Responsibility) scale can be used to determine the students' orientation of the locus of control.

The study also shows that the achievement in science does not depend on the orientation of the locus of control. Therefore, the score obtained in the IAR scale cannot be used to predict the achievement in science. This is because a high score in



the IAR scale is not an indication of high academic achievement, particularly in science. This is contradictory to many of the studies done, which show that students who are internals have high academic achievement.

The findings also reveal that self-confidence and motivation alone is insufficient in obtaining good achievement in science. External factors such as interest, guidance from parents and teachers, students' background, school and classroom environment, teaching methods and laboratory facilities can influence students' achievement in science.

These aspects should be identified and emphasized in schools, especially at the primary level. If this is not done students will lose interest in science and as a result achievement in science will be poor. This will result in fewer students opting for the science subjects at the secondary level.

#### Suggestions for further study

The findings of this study are useful to parents, teachers, the school administration, Ministry of Education and even the students themselves. However, in this study, only gender and achievement in science has been associated to the orientation of the locus of control. Other factors such as science process skills, talent, type and location of school, laboratory facilities, teachers' qualification and the number of teachers should also be emphasized. These factors may contribute towards a better understanding of the locus of control and its association to the achievement in science.



Furthermore, in this study, the orientation of the locus of control has been determined only at the primary six level. It is suggested that the orientation of the locus of control be determined at all levels of primary and secondary education. Its correlation to the achievement in science should also be determined in order to identify their level of motivation and interest in science at various stages of science education.

In this study, only the orientation of the locus of control and its association to the achievement in science is looked into. The causal factors of the low score in the IAR scale are unknown. It is suggested that this aspect be looked into in order to identify the reasons for poor motivational level. This is because further action can be taken by the school authorities to increase the level of motivation through motivational courses.

Lastly, this study is focussed only on the achievement in science. It is suggested that achievement in other subjects and its correlation to the locus of control be studied as well.

### Conclusion

Locus of control refers to one's belief in his or her ability; whether forces outside an individual or within an individual control the achievement. There are two types of orientation of the locus of control. Internal locus of control means that an individual accepts responsibility for his or her achievement. External locus of control means that the individual blames external factors for his or her achievement.

The purpose of this study is to determine the orientation of the locus of control among year six students. It was found that only 57.1% of the students are internally oriented. The mean score for the sample is only 17.82, showing a moderate inclination towards the internal locus of control. No significant difference was found in the orientation of the locus of control between the boys and girls.

Furthermore, no significant correlation was found to the achievement in science. This means that the orientation of the locus of control is not a factor which determines high achievement in science. Therefore, other factors, which determine high achievement in science, will have to be looked into. This is to ensure a lasting interest in science and to develop a society that is literate in science.