CHAPTER II

LITERATURE REVIEW

Introduction

In this chapter, various topics related to the study are discussed. The sub topics for literature review include motivation, locus of control and gender and locus of control and achievement in science.

Motivation

Much study has been done on motivation and empirical demonstrations show that self-realization plays an important part in perseverance. Perseverance is an important element in striving for achievement (Graham, 1991).

Motivation is the basic element in determining students' attitude towards effort. Mitchell (1982) refers to motivation as a psychological process that stimulates action for a given purpose. According to Bailey (1983), there are four basic elements in motivation. They are motive, action, purpose and satisfaction.

Motivation is defined by Alschuler (1973) as:

When the desire for excellence becomes a dominant concern for a person, it is expressed in restless driving energy aimed at doing things better, faster, more efficient, getting ahead, improving on past records or finding unique solutions to difficult problems.
According to Cooper (1974), motivation is an effort that results in one’s personal development. This development drives one towards achievement. For example, motivation enables an individual to strive for excellent academic achievement.

Students have different opinions about academic achievement. Udan and Maehr (1995) found that some students were of the opinion that excellent academic achievement is a must; therefore, motivating them to acquire knowledge at all times. According to them, the difference in opinion results in differing characteristics namely cognitively, attitude and degree of motivation in students.

Similar findings were reported by Siti Hawa Munji and Maarof Redzuan (1991) who stated that motivation is the overall inclination to act at a certain time. When one has the drive within, then the desire for achievement is great.

Social factors too, affect motivation (Juvonen and Weiner 1993). McClelland (1961) states that individuals who are highly motivated are not willing to take risks, are able to give quick feedback, responsible and are able to face challenges.

Self-concept is another factor affecting achievement (Calsyn and Kenny, 1977). Self-concept is an important factor in beginning the process of learning and to continue being diligent in the process of learning.

It can be concluded that motivation is an important characteristic in having a motive in life. It also affects one’s actions in achieving his or her purpose in life. Motivation controls the action that determines purpose and satisfaction in life.
Locus of control

Locus of control is similar to motivation. The idea is parallel to motivation and it determines the degree of effort and attitude of an individual. Locus of control refers to one’s belief of his or her achievement; whether the achievement controlled by forces outside of an individual or within an individual.

Locus of control is also one’s expectations to control his or her environment to achieve his or her objectives and needs. Joe (1971) and Phrase (1976) have found that locus of control is a trait of personality and it influences one’s attitude.

According to Rotter (1966), locus of control is the degree to which one accepts responsibility for an incident. One’s belief in his or her ability to control the incident is a variable of motivation that can influence his or her achievement. (Stipek and Wiesz, 1981).

There are two types to the orientation of the locus of control. These are the internal and external locus of control. External locus of control means that an individual blames outside factors for a certain outcome. The individual believes that a certain incident is beyond his or her control. Internal locus of control means that an individual accepts responsibility for the outcome.

Many studies have been done in various fields to study the orientation of the locus of control and the difference of the orientation between the boys and girls. Many studies have revealed that there exists a difference in the orientation between the boys and girls. A few studies have revealed that there exists no difference between them.
A study was done on year 3 to year 12 pupils to determine the orientation of the locus of control by Crandall et al (1965) by using the IAR (Intellectual Achievement Responsibility) scale. The results revealed that girls of year 6 to year 12 had a higher mean value (26.94-27.30) compared to boys (24.74-25.38). This shows that girls were more inclined towards internal locus of control compared to boys. However, there was no significant difference in the locus of control for pupils of year 3 to year 5.

Jamalullail (1990) studied the correlation between the IAR (Intellectual Achievement Responsibility) scale and the achievement of form 4 students in Selangor. The mean score for girls was found to be higher (25.80) than that of boys’ (24.10), showing that girls were more inclined towards internal locus of control than boys.

The findings were similar to that obtained by Norbaiti (1987) who also used the IAR scale on form four students in Selangor.

On the other hand, a study on students of University Kebangsaan Malaysia by using the RIES (Rotter Internal-external Locus of Control Scale) revealed that boys had a lower mean value (8.93) compared to girls (10.26). This shows that boys are more inclined to be internals than girls are (Chang, 1989).

A study by Blue (1986) on students of Gonzage University students by using the RIES scale revealed that there was no significant difference in the mean value between the boys and girls. This proves that there is no difference in the locus of control between the boys and girls.

Another study by Habibah (1991) looked into the effect of the orientation of the locus of control among year two students of Universiti Kebangsaan Malaysia. The results show that male students have high internal locus of control.
Locus of control and academic achievement

The orientation of the locus of control has been associated with various characters in an individual. The existence of the internal locus of control is closely linked with favourable characters in the individual. The IAR (Intellectual Achievement Responsibility) scale has been used in the educational research to determine the orientation of the locus of control of students. The results have then been associated to the achievement of students in various subjects.

Lefcourt's (1983) study revealed that children with internal locus of control concentrate more, are more inquisitive and are more skilled at processing information in comparison to children who are of external locus of control. Children who are internals are also less influenced by social ills and are psychologically more adaptable.

Other studies have shown that children of internal locus of control are more diligent (Crandall et al, 1965) and are more able to withstand pressure (Phrase, 1976). Bar-Tal and Bar-Zohar (1977) found that internals have more initiative and are more diligent in overcoming an obstacle.

According to Lefcourt (1992), locus of control plays an important role in determining students' level of motivation. Therefore, many studies have been done to determine the correlation between the students' orientation of the locus of control and their academic achievement.

McGhee and Crandall (1968) did a study on primary children by using the IAR (Intellectual Achievement Responsibility) scale to determine the orientation of the locus
of control. The study showed that students with internal locus of control obtained better grades academically. Similar results were obtained through other studies (Messer, 1972; Crandall ET al, 1965; Findley and Cooper, 1983; Reid and Croucher, 1980) where significant correlation was found between the locus of control and the grades obtained.

In another study to determine the effect of the locus of control on academic achievement among grade 7 and grade 8 students using the CNSIE (Children’s Nowicki-Strickland Internal-external Control Scale), it was discovered that students with internal locus of control obtained higher marks in an achievement test. Similar results were obtained by Moore (1985) who did a study on female students in a high school using the RIES (Rotter’s internal-external locus of control) scale.

Many studies have been done locally too. Maznah (1985) studied the effect of locus of control on year 3 pupils’ academic achievement using the IAR (Intellectual Achievement Responsibility) scale. She discovered that students with high scores in the IAR scale also obtained a higher mean value in Bahasa Melayu, English and Mathematics. However, the mean value for science was not given.

Similarly, Norasmah Othman and Siti Rogayah Ariffin (1996) and Bustaman Ahmad (1996) found significant correlation between the orientation of the locus of control and the achievement in science and mathematics.

Conclusion

It is clear from the review of literature that there is a correlation between the orientation of the locus of control and academic achievement. Motivation appears to be an important factor in determining students' academic achievement. Studies have shown
that students who are highly motivated also have high academic achievements, particularly in science and mathematics. This could be due to the fact that they are more able to face the challenges and difficulties faced in the subjects.

Researchers have used various instruments to measure the orientation of the locus of control. In this study, the IAR (Intellectual Achievement Responsibility) scale is used to measure the students’ locus of control and its correlation to their achievement in science.