

Achievement Motivation Training for University Students : Effects on Affective and Cognitive Achievement Motivation.*

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ABSTRAK

Objektif kajian ini ialah untuk mengkaji keberkesanan latihan motivasi pencapaian dalam meningkatkan aras motivasi pencapaian pelajar-pelajar universiti. Berasaskan teori motivasi pencapaian oleh McClelland (1961) dan teori atribusi oleh Weiner (1974) latihan motivasi pencapaian telah direkabentuk. Ia merangkumi pengajaran motivasi pencapaian, kajian sendiri, perancangan, penetapan matlamat dan permainan motivasi. Subjek terdiri daripada 188 pelajar tahun dua dan tiga aliran sastera dari sebuah universiti tempatan. Mereka dipilih berdasarkan markat motivasi pencapaian yang diukur dengan Ujian Peramatan Tematik. Subjek yang dipilih (N=188) dibahagikan secara rawak kepada salah satu daripada tiga kumpulan. Kumpulan motivasi pencapaian diberi latihan motivasi pencapaian, kumpulan perbincangan diberi rawatan alternatif dan kumpulan kawalan tidak diberi rawatan. Keputusan menunjukkan bahawa kumpulan yang diberi latihan motivasi pencapaian mengalami peningkatan yang signifikan dalam motivasi pencapaian afektif ($F(2,164) = 44.4, k<.05$) berbanding dengan kumpulan perbincangan dan kumpulan kawalan. Kumpulan motivasi pencapaian juga menunjukkan peningkatan yang signifikan dalam aspek kognitif motivasi pencapaian ($F(2,155) = 16.56, k<.05$) berbanding dengan kumpulan perbincangan dan kumpulan kawalan.

ABSTRAK

This study investigated the effectiveness of an achievement motivation training in increasing the level of achievement motivation of university students. An achievement motivation training was designed to include the teaching of achievement motivation, self-study, planning and goal-setting and motivational games. The subjects were 188 second and third year Arts students from a local university selected on their achievement motivation scores measured by the Thematic Apperception Test. The subjects (N=188) were randomly assigned to one of three groups. The achievement motivation group was given the achievement motivation training, the discussion group was given an alternative treatment and the control group was not given any treatment. The results indicated that the group which received the achievement motivation training demonstrated a significant increase in the affective aspect of achievement motivation ($p <.05$) compared to the discussion group and the control group. The achievement motivation group also showed a significant increase in the cognitive aspect of achievement motivation ($p <.05$) compared to the discussion group and the control group.

INTRODUCTION

Achievement Motivation was defined by Murray (1938) as the desire or the tendency to do well or to do better than others. The ability to solve problems, to achieve a high standard of work, the ability to do something unique are examples of achievement motivated behaviour. There are two

approaches to the study of achievement motivation namely the affective approach as advocated by McClelland (1961) and the cognitive approach as proposed by Weiner (1974). The affective approach views achievement motivation as the ability to experience pride from a successful competition with some standards of excellence. It is this

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pride that drives individuals to strive hard to achieve achievement goals.

Achievement motivation as viewed by the cognitive model is the capacity or the ability to think and to interpret the causes of success or failure in achievement related tasks. In an achievement related context, the causes perceived as most responsible for success and failure are ability, effort, task difficulty and luck (Weiner 1979).

Previous studies have shown positive correlations between the affective and cognitive aspects of achievement motivation. For instance, individuals with high achievement motivation as measured by the affective approach (TAT) perceived themselves as more able than those with low achievement motivation. High achievement motivated individuals attributed their success to their high ability, whereas those with low achievement motivation attributed their success to luck or other external factors. The high achievement motivated individuals also attributed their success to their expended effort (Weiner 1979).

The problem of students not being motivated or students with low level of motivation is very common even at the university level (Halim 1984, Marsh 1984).

McClelland (1965) proposed that motivation can be changed even at the adult stage. Empirical studies have shown that through training, adults can learn certain skills which help them to achieve their personal goals. For example, an achievement motivation training developed by Arnoff and Litwin (1971) in USA indicated a positive increase in achievement motivation of a group of entrepreneurs. A follow up study showed that their business activities increased after the training. In another study, Durand (1983) found a positive increase in achievement motivation of entrepreneurs after an achievement motivation training. There was a positive correlation between their achievement motivation scores and their business activities after two years of training.

Purpose of the Study

The purpose of this research was to investigate experimentally the feasibility of increasing motivation in a group of university students with a low level of achievement motivation.

According to McClelland (1965) a successful program of motivation change comprises four elements:

- a) conceptualization of the motive
- b) self-study in relation to the motive
- c) planning and goal setting
- d) group support

In achievement motivation training, participants are given guidance on how to think, talk and act like a person with high achievement and then examine carefully the extent to which they want to plan their lives in the immediate future (McClelland 1972).

McClelland (1961) contends that an individual's thoughts are related to his actions. Verbalising in a particular motive such as achievement, affiliation or power has a tendency to increase the frequency of thoughts on that motive. If a particular motive gets more attention in the form of discussion, the network of associations formed in the mind will have the effect of facilitating learning.

Previous studies have shown that among businessmen, achievement motivation training based on McClelland's program was effective in increasing the business activities of participants (Arnoff and Litwin 1971 and Durand 1983). Among students, the achievement motivation training has been shown to be effective in increasing the level of achievement motivation and achievement in certain school subjects (Burriss 1958, Kolb 1965, de Charms 1972 and Ryal's 1975).

In this study we developed a training program for university students based on McClelland's model, using materials developed by Alschuler (1973, and McClelland and Steel (1982). To determine the specific effects of the program on the cognitive and affective aspects of achievement motivation, the outcome of this program was compared to another treatment given to the discussion group. A no-treatment control group was also included to provide further comparison of the two treatments.

METHODOLOGY

Research Design

The study was based on pretest-posttest control group design as suggested by Campbell and Stanley (1963). The design of the study is shown in *Fig. 1*.

R	O_1	X_1	O_2
R	O_3	X_2	O_4
R	O_5		O_6

Key

- O_{1-6} – Observation (Pretest and Posttest)
- X_1 – Treatment for N Achievement Group
- X_2 – Treatment for Discussion Group
- R – Randomization

Fig. 1 Research Design

Subjects

Subjects were 188 second and third year Arts Students from a local university. Among the subjects were 100 Malays and 88 Chinese. They were among 428 students who took the Thematic Apperception Test (TAT) earlier to determine their achievement motivation level. Those with low achievement motivation (lowest 30%) were randomly assigned to one of three groups.

Outcome Measures

Four measures of achievement motivation were used:

- a) Thematic Apperception Test: a projective measure of achievement motivation using four pictures by McClelland, Atkinson, Clark and Lowell (1953). This is an affective measure of achievement motivation. The TAT had an interscorer correlation of 0.96.
- b) Motivation Scale: an objective measure of achievement motivation using questionnaires based on situations adapted from 'Guessing Test' by Udai Pareek. This is another measure of affective achievement motivation. The motivation scale recorded an alpha value of .69.
- c) Locus of Control: The Rotter Internal-External Scale (RIES) was used to measure locus of control, a cognitive aspect of achievement motivation where a lower score indicates a greater sense of internal control. The RIES recorded an alpha value of .78.
- d) Attribution of Success and Failure: An attribution Scale adapted from the Causal Dimension Scale by Russel (1983) was used to measure attribution of success and failure based on three dimensions namely locus of con-

trol, stability and controllability. This is another measure of cognitive achievement motivation. The attribution scale had an alpha value of .72 .

PROCEDURE

Achievement Motivation Training Group

The Achievement Motivation Training was based on McClelland's (1965) Achievement Motivation Program but was adapted by Alschuler (1973) and Ashton (1986). The original McClelland's Achievement Motivation Training course was conducted over a period of between 20 to 40 hours. The training was reduced to 11 hours by Alschuler (1973) and to 6 hours by Ashton (1986). Due to the practical problems involved in conducting the training program during the semester, the training described in this study was reduced to 9 hours. However, the input variables in the McClelland's model were retained in the shortened course.

The training was conducted by the researcher assisted by two trained research assistants. The achievement motivation training was spread over six sessions and each session took about one hour and thirty minutes. Subjects met twice a week for three weeks. The training was done on campus.

The Achievement Motivation Training input consisted of the following :

1. Written exercise on "Who Am I", an activity which guides the subject to analyse himself in terms of his strengths, weaknesses and his goals in life.
2. A motivational game and discussion of the results.
3. A second motivational game and discussion of the results.
4. Admiration ladder, an activity which helps the subject to identify personalities whom he admires and the characteristics of each personality are cited.
5. Analysis of the Thematic Apperception Test, an activity which guides the subject to analyse the TAT stories according to the various achievement categories.
6. A problem solving activity where subjects are given a problem to solve individually and in a group.

TABLE I
Means and standard deviations for the Three Groups

variable	Groups	N	Means		Std. deviations		b-a
			pre (a)	post (b)	pre	post	
Achievement	N Ach	59	3.83	11.02	1.65	3.89	7.19
Motivation (TAT)	Discussion	57	4.02	6.24	1.78	2.30	2.22
	Control	72	4.04	6.25	2.01	2.67	2.21
Achievement	N Ach	59	6.16	13.12	2.59	2.63	6.96
Motivation (MOT)	Discussion	57	6.68	11.89	2.23	2.78	5.21
	Control	72	7.14	11.72	2.47	2.62	4.58
Locus of Control	N Ach	59	10.2	6.60	3.67	3.66	-3.69
	Discussion	57	10.5	9.55	3.29	3.85	-0.99
(RIES)	Control	72	9.4	8.90	3.27	3.49	-0.56
	N Ach	59	66.7	102.90	10.64	15.42	36.16
Attribution (ATS)	Discussion	57	68.6	96.93	13.44	17.76	28.26
	Control	72	70.5	97.78	11.57	15.41	27.24

The achievement motivation training laid special emphasis on achievement thinking. According to the achievement motivation theory, how an individual thinks affects, to a certain extent, his future undertakings. Furthermore, the expectancies and the motives which surface in one's thinking also affect his future actions. The achievement motivation training program was expected to have a significant outcome in terms of increased achievement motivation and internal locus of control. This hypothesis has been supported by research findings (de Charms 1971, Biaggio 1978, Hosek and Man 1981) which suggest that human motives can be learned or changed through a structured form of training.

Discussion Group

The purpose of the discussion group was to develop positive thinking. Problems for discussion were selected from The Mooney Problem Checklist. The subjects in this group participated in other problem solving activities to develop lateral thinking. The purpose of incorporating the discussion group in the experiment was to see if there was any Hawthorne effect in the study. If the outcome of the training program was influenced by the specific techniques used, then it could be concluded that the program was effective. However, if the effects were about equal or less than those in the other forms of treatment, then the Hawthorne effect would have been apparent.

The discussion group, therefore, provided the data to ascertain that there was no Hawthorne effect.

To avoid interactions between the groups, the training was conducted simultaneously for the different groups.

No Treatment Group

This group was subject to the pretest and the posttest at the same time as the other groups but had no other intervening treatment. This control group enabled the researcher to compare the effects of the treatments received by the other two groups.

RESULTS

Achievement Motivation

The Results for TAT

The means and standard deviations for achievement motivation as measured by the Thematic Apperception Test (TAT) are presented in Table 1.

The posttest means indicated an overall increase in the level of achievement motivation: the group which received the achievement motivation training showed the highest increase (Table 1)

The achievement motivation data were subjected to an analysis of covariance to determine if the observed differences were significant. ANCOVA results indicated that the mean differ-

ences were significant ($F(2, 121) = 45.11, p < .05$). Further comparison of the means using the Student Newman Keuls Test showed that the achievement motivation group was superior to the discussion group and the control group in the level of motivation. However, the mean difference in the discussion group was not significantly different from that in the control group.

An interesting finding in the n-achievement group is the significant difference between the achievement motivation of the two ethnic groups under study ($F(1,33) = 6.18, p < .05$). Comparison of the means showed that the Chinese students had higher achievement motivation than the Malay students after the training.

The Results for Motivation Scale

The means and standard deviations for achievement motivation as measured by the Motivation Scale (MOT) are also presented in Table 1. As expected, the post-test means indicated an increase in the level of achievement motivation and the n-achievement group recorded the highest score. An analysis of covariance on the achievement motivation data indicated that there was a significant difference in the means for the treatments ($F(2,124) = 4.31, p < .05$). Further comparison of the means using the Student Newman Keuls Test showed that the n-achievement group was superior to the discussion group and the control group in terms of the increase in achievement motivation. However, there was no significant difference between the discussion group and the control group. The present results confirm earlier findings that achievement motivation training tends to increase the level of achievement motivation.

The Results for Locus of Control

The means and standard deviations for Locus of control as measured by the Rotter I-E Scale (RIES) are presented in Table 1. The posttest scores showed a decrease, indicating an increase in internal control. The n-achievement group had the highest internal control compared to the other two groups. Analysis of covariance on the locus of control data indicated a significant difference in the means for the treatments ($F(2,120) = 9.01, p < .05$). Further comparison of the means showed that the n-achievement group was more internally

oriented than the discussion group and the control group. However, there was no significant difference between the discussion group and the control group.

The Results for Attribution of Success and Failure

The means and standard deviations for attribution of success and failure (ATS) are presented in Table 1.

Analysis of covariance on the attribution data indicated that there was no significant difference in the means for the treatments. The results did not support earlier findings on internal control; this could be due to the different aspects covered in the measurement. The Rotter I-E Scale (RIES) focusses on the locus of control only, whereas the attribution scale covers a wider scope; that is, locus of control, stability and controllability in the attribution process. The present results suggest that further research is needed to study the effects of the achievement motivation training on the attribution process.

DISCUSSION

The ability of the achievement motivation training program to increase the level of achievement motivation suggests that the McClelland approach to motivation change is a practical and viable model for developing change programs with university students. This approach to motivation change should be of value to educational psychologists especially for the purpose of affecting a wide range of motives and attitudes.

Our results support the findings of earlier studies done by de Charms (1971), Biaggio (1978) and Hosek and Man (1981). The specific activities and procedures of the structured and directed McClelland approach were more effective than the activities given to the discussion group in increasing the level of achievement motivation and the feelings of internal control. The achievement motivation training input laid special emphasis on achievement thinking, competition, excellence, challenges, self-study, planning and decision making. These training input characteristics may have contributed to the change in achievement motivation and locus of control of the subjects.

The Chinese students appeared to have benefited more from the achievement motivation training than the Malay students. This could be

due partly to their way of life and childhood upbringing which are closely related to the business world. They tend to be more familiar with the training input characteristics such as competition, excellence, planning and decision making, achievement thinking and challenges in life. Past studies have shown that in a situation without training, Chinese students have higher achievement motivation than the Malays (Zainab and Kwok 1970, Wan Rafeai 1980). Winterbottom (1958) and Siti Rahayu (1984) have indicated that certain child rearing practices, for instance, encouraging independence at an early age can contribute to the development of high achievement motivation among children. The achievement motivation training in this study has a similar objective namely, to instill in the participants the behaviour characteristics which are conducive to the development of high achievement motivation.

The fact that the Malay subjects in the n-achievement group did not show a similar increase in achievement motivation could be due to their different cultural values and practices (Taib 1989). Their cultural values may be different from those that were emphasised in the training.

The training also succeeded in increasing the internal locus of control. The results support other findings e.g. (de Charms 1971, Weiner 1979, 1986, Craske 1985, Ashton 1986) that individuals with high achievement motivation are more internally controlled.

After training, the Chinese subjects showed more internal locus of control compared to their Malay counterparts. The result supports Cunningham's (1983) findings that there are differences in the effects of training according to ethnic group.

CONCLUSIONS

The achievement motivation training succeeded in increasing the achievement motivation of university students. After the training, subjects showed more frequent achievement thinking such as the desire to achieve excellence, the need to progress, positive expectations and preference for challenging tasks. The training also increased their internal locus of control. They believe that factors which are related to themselves such as their ability and effort can affect their life experi-

ences and their behaviour outcomes. They also believe that factors which are beyond their control such as task difficulty and luck do not play an important role in determining their life experiences or behaviour outcomes.

This study was successful in designing and testing an achievement motivation training module for university students. It is possible that the module used in this study may prove useful to those interested in enhancing achievement motivation and students' internal locus of control.

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