The Effectiveness Of Two Approaches Of Career Self-Concept Enhancement

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1.   Introduction

This study used the quasi-experimental research design to measure the effectiveness of group guidance and individual counselling approaches to enhance pupils' career self-concept. The treatment (enhancement process) was carried out by trained personnel using a new package of career guidance activities for nine sessions during the July term in 1988.

The career guidance package, the training of personnel, the validation of career self-concept instrument, as well as the research design, implementation and evaluation were the tasks achieved by the team which investigated the research question: "How effective is the use of non-traditional approaches, including non-traditional personnel and technologies, in developmental career guidance?". The team is part of the seventh research project of the Educational Research Unit, Institute of Education, Singapore. The project leader was Dr Esther Tan, the members of this team were Dr Lui Hah Wah Elena (leader), Miss Vilma D'Rozario, Mr Lee Tiong Peng, Miss Cindy Prowse, Mrs Katherine Yip and Mr Peter Khor.

2.   The Sample

The target population of this study was the lower secondary school pupils in Singapore. The rationales for confining the study to secondary 1 and 2 pupils were:

(1)   the training packages focused on the development of career self-concept which, according to vocational psychologists, is a major developmental task at the early stage of adolescence;

(2)   at the beginning of secondary school pupils should start their discovery of the world of work, and

(3)   this package should help build a good foundation for the pupils' career development before they are "streamed" into the science, arts or commerce courses.

For group guidance, the sample size of each group was 16 at each level of Sec 1 and Sec 2. For individual counselling, 8 pupils from each level were selected. There were equal numbers of both sexes in all sample groups.

The control groups had equal size of sample (N=16) at each level in the same school as well as in another school. Bowen Secondary School was chosen to be the pilot school because of the strong support from the principal and also the lower secondary population was "uncontaminated" in terms of career guidance activities. Thomson Secondary School was selected for the control groups because the student sample matched that of Bowen Secondary School in terms of having limited exposure to career guidance.

The distribution of pupils and teachers in the sample for experimental experience is stated in Table 1.

Table 1. Sampling Design & Approaches Adopted For Experimental Groups

Level / Personnel Involved			
	Sec 1	Sec 2	Total
Group Guidance	1 Teacher 16 Pupils (8 Boys & 8 Girls)	1 Teacher 16 Pupils (8 Boys & 8 Girls)	2 Teachers 32 Pupils
Individual Counselling	2 Teachers 8 Pupils (4 Boys & 4 Girls)	2 Teachers 8 Pupils (4 Boys & 4 Girls)	4 Teachers 16 Pupils
Total	3 Teachers 24 Pupils	3 Teachers 24 Pupils	6 Teachers 48 Pupils

3. **Procedures**

From February to May, 1988, the team developed a career guidance package of 9 sessions of career self-concept enhancement activities for lower secondary school pupils. The title of this package is "Me and My Future – A Career Workbook".* The theoretical framework was based on Donald Super's Developmental Self-Concept Theory (U.S.), while the structuring of the package adopted the approach of the Career Research and Advisory Council Breakout series (U.K.).

In July 1988, two team members and the project leader took turns to conduct three training sessions for the six research associates in Bowen Secondary School. These research associates were the teachers recommended by their principal based on two criteria, i.e.

(1)   They had a genuine interest in career guidance, and

(2)   They were keen to participate in this study.

From July 29 to October 7, nine sessions of the career guidance package were conducted by these six research associates. The team members also took turns to observe the group guidance sessions which usually took place on Fridays during the school's community singing hour. This time slot was chosen to avoid any interruption during curriculum time.

4. **Instrumentation**

The treatment effect was measured by a 25-item force- choice checklist "Career Self-Concept" developed by this team in April – May, 1988. The original design had a total of 30 items, 6 items for each subscale: Values, Aptitude, Myself, Interest and Parents. After the pilot test (administered to a sample of 100 lower secondary

* This package is available for reference at the Department of Educational Testing, Guidance and Councelling, Institute of Education. The Table of Contents is at Appendix I.

school pupils), the team decided to drop 5 weak items and keep the length of the test to 25 items. The maximum possible scores is 25 and the minimum is 0. The reliability of the self-concept checklist in the pilot test was acceptable as the KR 20 of the total scale was 0.77.

In mid July, 1988 the pretest was administered to 130 pupils of secondary one and two classes at Bowen Secondary School and to ·the same number of pupils at Thomson Secondary School. The results showed that this instrument had acceptable reliability (KR 20 = 0.76). The total scale and subscales' correlations ranged from 0.36 to 0.81. Most of the 25 items' discrimination power was above 0.20.

The post-test was conducted with the same samples in mid October, 1988. The number was reduced to 257 because of three pupils' absence. The test results showed similar features as the pre-test, with increases of reliabilities of the total scale (KR 20 = 0.82). The concurrent validity was tested by administering a locally validated instrument for lower secondary pupils, "Self-Esteem Checklist" (LUI), at the same time to the control group samples. The correlation coefficient was relatively high (r = 0.54). Thus the concurrent validity was established.

Generally speaking, the Career Self-Concept Checklist has shown acceptable reliability and validity in the measurement of lower secondary pupils' career self-concept. The main features of the instrument in the pre-test and post-test also remained consistent.

5.   **Results**

The pre and post tests method was used to measure the treatment effects of the career guidance sessions. The comparison of pre-test and post-test results showed that the total sample of experimental groups (N = 32) had a statistically significant gain of mean score of 3.32. The t-test value is 4.57 (P < 0.001). When the outcomes of pre and post tests of the control groups were compared, there was no significant gain in mean scores. (Table 2).

Further investigation of treatment effects on the two experimental sub-groups (Bowen's Sec 1 and Sec 2 pupils),

indicated that both sub-groups had significant gains of mean scores, at 0.01 level. Sec 1 gained 3.69 points (t = 3.28) while Sec 2 gained 2.94 points (t = 3.12). (Table 3).

The measure of treatment effect for the 16 individual counselling samples showed that there was also a significant gain of 4.81 points in the post-test mean score, (t = 4.73, P < 0.001). (Table 4).

Table 2. Comparison Of Pre & Post-Test Mean Scores (Group Guidance)

Group	N	Pre-test Mean S.D.	Post-test Mean S.D.	Mean Scores Differences	t
Experimental (Bowen)	32	15.34 3.63	18.66 4.34	3.32	4.57*
Control (Bowen)	32	16.25 4.68	17.13 4.13	0.88	1.30
Control (Thomson)	32	15.75 4.04	16.94 4.56	1.19	2.20

* P < 0.001.

Table 3. Comparisons Of Pre & Post-Test Mean Scores Of Experimental Groups (Comparison By Level)

Experimental Group	N	Pre-test Mean S.D.	Post-test Mean S.D.	Mean Scores Differences	t
Secondary 1	16	16.31 3.11	20.00 4.50	3.69	3.28*
Secondary 2	16	14.38 3.95	17.31 3.90	2.94	3.12*

* P < 0.01.

Table 4. Comparison Of Pre & Post-Test Mean Scores Of Experimental Groups (Comparison By Approach)

Treatment Approach	N	Pre-test Mean S.D.	Post-test Mean S.D.	Mean Scores Differences	t
Group Guidance	32	15.34 3.63	18.66 4.34	3.32	4.57*
Individual Counselling	16	15.75 4.68	20.56 3.33	4.81	4.73*

* P < 0.001.

The effect size of group guidance of the experimental group as compared to that of the control group at Bowen Secondary School is 0.36. (Table 5A). When compared with the control group at Thomson Secondary School, the effect size is 0.38, very close to the effect size of the Bowen sample. (Table 5B).

Table 5A. Effects Of Group Guidance Treatment (Bowen vs Bowen)

Experimental Group Guidance	Post-Test		Control Group	Post-Test		Effect Size
	$\bar{X}e$	SDe		$\bar{X}c$	SDc	
Bowen	18.66	4.34	Bowen	17.13	4.31	0.36

Table 5B. Effects Of Group Guidance Treatment (Bowen vs Thomson)

Experimental Group Guidance	Post-Test		Control Group	Post-Test		Effect Size
	$\bar{X}e$	SDe		$\bar{X}c$	SDc	
Bowen	18.66	4.34	Thomson	16.94	4.56	0.38

Note: Effect Size = $(\bar{X}e - \bar{X}c) / SDc$

The effect size of individual counselling of the experimental samples as compared to that of the control samples at the Bowen Secondary School is 0.40. (Table 6A). This is quite comparable with the findings of the group guidance approach with the Bowen groups (0.36). However, the effect size of individual counselling of the Bowen samples as compared to that of the Thomson Secondary School samples is unexpectedly great, 0.96.

Table 6A. Effects Of Individual Counselling Treatment (Bowen vs Bowen)

Experimental Individual Counselling	Post-Test		Control Group	Post-Test		Effect Size
	$\overline{X}e$	SDe		$\overline{X}c$	SDc	
Bowen	20.56	3.33	Bowen	18.31	5.65	0.40

Table 6B. Effects Of Individual Counselling Treatment (Bowen vs Thomson)

Experimental Individual Counselling	Post-Test		Control Group	Post-Test		Effect Size
	$\overline{X}e$	SDe		$\overline{X}c$	SDc	
Bowen	20.56	3.33	Thomson	16.75	3.99	0.96

The comparison of mean scores differences of the pre and post tests showed that the individual counselling samples in Bowen Secondary School had a gain of 4.81 points (t = 4.73, P < 0.001), the control samples in Bowen Secondary School gained 1.44 (t = 0.81, n.s.) and the control samples in Thomson Secondary School gained merely 0.88 (t = 1.09, n.s.). (Table 7). The small gain of mean scores and relatively small standard deviation of the post-test (SDc = 3.99) in the Thomson samples could explain why the effect size is so great when the mean scores gains of the Bowen experimental samples and Thomson control samples were compared.

Table 7. Comparison Of Pre & Post-Test Mean Scores
(Individual Counselling)

Sample	N	Pre-test Mean S.D.	Post-test Mean S.D.	Mean Scores Differences	t
Experimental (Bowen)	16	15.75 4.68	20.56 3.33	4.81	4.73*
Control (Bowen)	16	16.87 4.80	18.31 5.65	1.44	0.81
Control (Thomson)	16	15.88 4.06	16.75 3.99	0.88	1.09

* $P < 0.001$.

6.   Evaluation of the Career Guidance Package

In addition to the above-mentioned measurement of treatment effects, the team also adopted a three-pronged approach to evaluate the career guidance package, "Me and My Future – A Career Workbook". The three methods of evaluation were:

1)   Interviews with all the six teachers (research associates) who used the package for the guidance/counselling sessions

2)   nterviews with 50% of the pupils in the experimental group sample (by random selection)

3)   Assessment of the pupils' files (written work and artwork), also by random selection.

Due to time constraint at the school and the heavy workload of the team members, the evaluation of pupils' responses and performance could cover only half of the samples.

Generally speaking, the career guidance package has received very favourable responses from its users (teachers and pupils) in this study. Yet there is still room for improvement in the various areas, e.g. more guidelines for teachers, more provision for group interaction, more information on the world of work, etc. Although it was meaningful to involve the parents, the pupils need more preparation and guidance in talking to their parents on the topic of career planning. Teachers too, would need more training in this particular area.

7. Conclusion

The team's main task was to investigate the effectiveness of a career guidance package designed to enhance the career self-concept of lower secondary school pupils. The outcomes of this study showed that the package was effective in group guidance, the total sample's (N = 32) gain in mean scores was statistically significant. The gain of mean scores in both Sec 1 and Sec 2 groups were significant. As for the control groups, there were no significant differences of mean scores in both the Bowen Secondary School and Thomson Secondary School groups.

The treatment effect of individual counselling (N = 16) using the package also was statistically significant. The mean scores difference in the pre and post tests, was a gain of 4.81 points which is slightly greater than the mean scores difference of 3.32 in the group guidance samples (N = 32). As for all the control samples, there were no significant differences of mean scores at all.

On the whole, the pilot test of the package on the enhancement of career self-concept has proven its effectiveness to a certain extent. The process of conducting this study, including the development of the Career Self-Concept Package and the Career Self-Concept Checklist, was really a very valuable research experience for the team members and research associates. Furthermore, the pupils involved in the piloting of the package have benefitted, in various degrees, in enhancing their career self-awareness as well as career maturity.

There were significant increases of mean scores in all the experimental samples in both approaches in this quasi-experimental study. This is encouraging for educational researchers who are interested in the development of non-traditional methods, resource materials, technologies and personnel in career guidance and related fields.

8.   **Classroom Application**

It would be ideal if the team could have the sufficient manpower and finance to refine and publish the career guidance package "Me and My Future" and the teacher's guide. However, this aspiration is yet to be realized. Meanwhile a couple of the career guidance activities were introduced to teachers who attended the training courses on pastoral care and career guidance. The most frequently used activity was the "Auction of Work Values." The procedures of this activity is include in this article at Appendix II, for teachers' reference and application in classroom guidance. It is hope that more teachers would be motivated to enhance pupils' career self-concept and enable them to be better prepared for the world of work.

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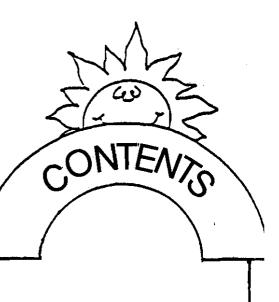
ME AND
MY FUTURE

A CAREER WORKBOOK

INTRODUCTION

This booklet has been designed to help students find out about their interests, abilities, values and to understand that finding a suitable career means to a certain extent, knowing ourselves. To really benefit from this booklet you should carry out each activity as instructed, and always remember to answer questions truthfully. You should not put down what others think but what you think. We hope you will enjoy these activities and come out feeling great!

CONTENTS

1. ORIENTATION AND INTRODUCTION WHO AM I?

2. WHAT ARE MY INTERESTS?

3. LOOKING AT MY INTERESTS IN GREATER DETAIL

4. WHAT SKILLS AND ABILITIES DO I HAVE?

   WHAT SKILLS AND ABILITIES DO I HAVE? (CONTINUED)

6. THINGS I VALUE

7. LOOKING INTO THE FUTURE

8. TALKING ABOUT MY ASPIRATIONS AND HOPES

9. WHAT I'VE LEARNED ABOUT "ME"

AUCTION OF WORK VALUES

1. This activity is designed to enable pupils to develop self-awareness in the area of work values, i.e. the values that are related to their future careers.

2. The target group for this activity can range from primary 6 to Pre-U2.

3. To prepare for this activity, the teacher should first work out a list of work values, such as: helping others, influencing people, intellectual stimulation, creativity, variety, security, prestige, achievement, leisure, family life, leadership, adventure, independence, good colleagues, good boss, good income, comfortable environment, convenient time.

   Write them on a chart and the worksheets, put "Rank" and "Bids" next to the heading "My Work Values", e.g.:-

   <u>My Work Values</u>   <u>Rank</u>   <u>Bids</u>

4. To conduct the auction, the teacher needs to explain the rules before the pupils start bidding. The rules are:

   (a) Everyone has $1000 to spend at the auction.

   (b) Each person is allowed to bid on any work value he likes to buy for under $1000.

   (c) He may bid for more than one work value. However, it would be wise reserve enough money for the work values that are important to him.

   (d) He should use the worksheet to write down the amount of dollars he is willing to spend for his chosen values in the space provided (Bids) after ranking these values.

(e)   Work Values will be sold to the highest bidder.

5.   After the auction, there should a "de-briefing" (group discussion) to facilitate the reflection and self-evaluation among the pupils.

6.   The duration of this activity may vary from half an hour to an hour, all depends on the size of the class (or group) and the participation level of the pupils.