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## THE LIFE CAREER GAME AND DECISION-MAKING AMONG NINTH GRADERS

Training in decision-making has been recommended as an appropriate strategy for secondary school guidance programs (Dilley, 1967; Gelatt, 1962; Loughary, 1961; Varenhorst, 1966), and decision-making training is being tried in several school systems, particularly in Palo Alto, California (Varenhorst, no date; Sherman, 1967). The chief purpose of such training is to increase students' ability to make wise decisions regarding all aspects of their lives (Gelatt & Varenhorst, 1968).

Training in decision-making is defensible because of the growing complexity of our society. For example, it has been estimated that 60 million jobs will be affected by automation in the next generation (Wrenn, 1964, p. 31). Occupations chosen by high school freshmen may be substantially modified by the time students are ready to enter that occupation. Helping students learn how to make decisions is just as important as helping them to make specific decisions.

Understanding a decision-making strategy for guidance necessitates the clarification of the decision-making process. Decision-making may be viewed as a process in that the outcome of every decision provides the decision-maker with information which can be used in future decisions. Several investigators have offered models which describe this process (Bross, 1953; Clarke, Gelatt, & Levine, 1965; Cronbach & Gleser, 1951; Dilley, 1965; Gelatt, 1962; Gelatt & Clarke, 1967; Kaldor & Zytowski, 1969; Katz, 1966; Krumboltz, 1966; Wilson, 1967; Yabroff, 1964). Although the nomenclature used by various investigators is diverse, the essential ingredients of their models are similar. The process of decision-making appears to involve three systems: an assessment system, an evaluation system, and an integration system. The assessment system consists of: a) awareness of a decision to be made, b) awareness of alternatives, c) knowledge of outcomes associated with each alternative, d) knowledge of the probabilities associated with each outcome. The evaluation system involves the personal desirability of the various outcomes and is a reflection of the individual's values. The integration system involves the selection of a course of action that has the greatest probability of producing a desired outcome.

The Life Career Game is a simulation game that was constructed to give students familiarity with the kinds of decisions that must be made about jobs, further education or training, family life, and the use of leisure (Boocock, 1968, p. 107). Students divide into teams of three or four and plan up to eight years in the life of a hypothetical person. The teams make decisions for the hypothetical person such as the type of educational

experiences he will have, whether or not he will work, and how he will spend his leisure time. One round of the Game represents one year of the hypothetical person's life. Each team receives a score after every round to help players evaluate the decisions they have made. The Game appears to be a promising technique for a decision-making approach to guidance since it can be played with a group as large as 30, it adapts to nearly any time schedule (i.e., one hour a day, one hour a week, a half hour a day, etc.), and it can be worked into the content of nearly any course taught at the secondary level.

### PURPOSE

The purpose of this study was to investigate the effect of the Life Career Game on four decision-making variables at the ninth-grade level. These variables were: a) awareness of the importance of life decisions, b) exploratory activity, c) concept of self, d) concept of others. The first two variables are elements of the assessment system of the synthesized model of decision-making previously discussed. These variables were chosen because they are the first two steps in decision-making. A person is first aware of the need for a given decision and he then explores to learn of alternatives and the outcomes of the alternatives. Concept of self and of others are elements of the evaluation system and were selected because they reflect a person's value system. How a person views himself and others predetermines which alternatives he sees as desirable. The following questions were the focus of this investigation:

1. Will playing the Life Career Game affect ninth grade boys' and girls' awareness of the importance of future life decisions?
2. Will playing the Life Career Game affect the exploratory activity of ninth grade boys and girls?
3. Will playing the Life Career Game affect ninth grade boys' and girls' concept of self and concept of others?

### INSTRUMENTS

The Concerns of Youth Inventory (COY) was used to measure awareness of the importance of life decisions. The COY is a rating scale that asks students to check the degree to which they see life decisions as important to ninth graders. The instrument began as an open-ended questionnaire in which students were asked to list the decisions they saw as important to ninth graders. From this questionnaire 40 statements were chosen and developed into a rating scale. A split-half reliability was computed on the students' COY scores for this study and the reliability coefficient using Spearman-Brown correction formula was .90.

The Checklist of Exploratory Activities (CEA) was used to measure exploratory activity. The instrument asks students to check any exploratory activities that they have engaged in on their own initiative. To encourage honesty the students are asked to write the name of the person from whom they sought help.

The Bills Index of Adjustment and Values (IAV) is an unpublished adjective checklist developed by Robert E. Bills. The adjectives are rated twice—as the subject sees himself and as he sees others. The instrument yields a score for concept of self and a score for concept of others. The IAV manual (Bills, no date) reports split-half reliabilities (corrected using Spear-

man-Brown prophecy formula) of .53 for the Self and .92 for the Others measures.

### PROCEDURES

The subjects were 39 ninth-grade students enrolled in a citizenship class at the University of Missouri Laboratory School, Columbia, Missouri. At the beginning of the second semester they had been divided randomly into two groups. The group containing 19 students (9 boys and 10 girls) was selected as the experimental group while the other group, containing 10 boys and 10 girls, was used as a control and did not play the Game.

Both groups were administered the three instruments used in the study one week before the experimental group began playing the Game. At the time, the COY was an open-ended questionnaire and was not scored. Independent *t* tests of means and *F* tests of variances were computed to determine if there were differences between the control and experimental groups on the other two instruments. There were no significant differences at the .05 level of confidence between the two groups on either of the instruments. These data indicated that prior to the study there was no difference between the experimental and control groups with regard to the variables being investigated.

Before the Game was introduced to the experimental group, the teacher of that group and a counselor-in-training met for three one-hour training sessions with the researcher. Before starting the Game, the teacher divided the class into five groups of three students each and one group of four students. The teacher grouped the students on the basis of which ones she felt would work best together. The teacher introduced and conducted the Game and the counselor-in-training helped by going from team to team to answer questions once the students began playing.

All six teams used the profile of Mary (one of the hypothetical persons in the Game), an above-average ability student who had failed all of her courses but one during her sophomore year in high school. The Game was played each Friday for 50 minutes. Six sessions were conducted covering a time span of seven weeks and four rounds of the Game were completed.

One week after the completion or round four, both the experimental and control groups were administered posttests. The CEA, IAV-Self, and IAV-Others were the same instruments used in the pretest. The COY by this time had been developed into a checklist and was administered in this form. The difference scores from pretest to posttest for the CEA, IAV-Self, and IAV-Others were analyzed statistically. The posttest scores of the COY were also analyzed. A two-factor, unequal *n*, analysis of variance (ANOVA) design was used with the scores of each instrument to test the effects of treatment, sex and the interaction of treatment and sex.

### RESULTS AND CONCLUSIONS

The ANOVA over the COY scores showed no significant differences for treatment, sex, or interaction. It can be concluded that playing the Life Career Game had no effect on ninth-grade boys' and girls' awareness of future life decisions.

The ANOVA over the CEA scores showed no significance for treatment or sex, but there was significance at the .05 level of confidence for interaction between treatment and sex. When the mean difference scores (see

Table 1) were examined to determine the source of the interaction, it was found that control group boys had higher mean differences than control group girls. In the experimental group, however, girls had higher mean differences than boys, the boys showing a large decrease in exploratory activity. The effect of playing the Life Career Game, compared to no treatment, was to decrease boys' exploratory activity and to increase the exploratory activity of girls.

TABLE 1  
Mean difference scores by sex and treatment

	CEA		IAV-OTHERS	
	Control	Experimental	Control	Experimental
BOYS	+ .90	-2.90	-20.67	+13.57
GIRLS	-1.90	- .40	+12.44	-14.44

The analysis of the IAV-Self scores showed no significant differences for treatment, sex, or interaction. The Life Career Game had no effect on boys' and girls' concept of self in this study.

The ANOVA over the IAV-Others scores showed no significant differences for treatment or sex. There was, however, significant interaction at the .01 level of confidence. An examination of the mean difference scores (see Table 1) showed that in the control group, girls' scores increased while boys' scores decreased. The experimental group showed a reverse effect. Boys increased their scores while girls decreased. It appears that the effect of the Life Career Game was to increase boys' positive concept of others and to decrease girls' positive concept of others.

#### SUMMARY AND DISCUSSION

Since this study made use of a rather specific population, the results should be viewed cautiously. The data of this study, however, do support the hypothesis that the Life Career Game affects decision-making variables at the ninth grade level.

It should be noted that even though experimental girls' CEA scores were higher than the control girls' scores, the experimental girls still had a slight decrease in exploratory activity from pretest to posttest (see Table 1). In fact, three of the four treatment combinations showed a decrease in exploratory activity from pretest to posttest. Only boys in the control group showed a slight increase. Further investigation should be conducted to determine if students tend to reduce exploratory activity the second semester of their ninth-grade year.

The Game appears to have had the greatest effect on students' concept of others. The control group, without treatment, showed a decrease in boys' positive concept of others from pretest to posttest and an increase for girls. Whether or not this is a typical occurrence at the ninth-grade level would have to be determined by further research. Nevertheless, the Life Career Game had a powerful enough effect to reverse the directions for both boys and girls.

There may be some counselors who are interested in using the Life Career Game. Throughout the study observations were made and student reactions were solicited. Four of these observations and reactions are listed

below along with suggestions for improving the use of the Game with ninth graders.

1. There has been some question as to whether or not ninth-grade students could master the complicated rules and procedures of the Game. It was observed that they learned quickly and easily, including those students who ordinarily perform poorly in a classroom.
2. It was observed, also, that students' enthusiasm for the Game seemed to go through cycles. The students tended to be bored while the rules and procedures were being presented. When they actually started playing the first round, their enthusiasm was obvious. Players eagerly discussed and debated within their teams while trying to make plans for their hypothetical person. Since the next two rounds were very similar to the first in that the hypothetical person was still in high school, the students' enthusiasm decreased. They appeared bored with making the same kinds of decisions. In the fourth round, when decisions had to be made about where to go after high school, enthusiasm increased once again. It might be possible to sustain enthusiasm for ninth graders by beginning the Game at the point where the hypothetical person is in her senior year in high school rather than her sophomore year.
3. Students tended to be frustrated because the profile of the hypothetical person whose life they were planning did not provide enough information. They felt as if they didn't know the person well enough to make decisions for her. Students made comments such as "I can't tell what she'd be most satisfied with!" Perhaps the profile could be expanded with the use of pictures and added bits of information about the interests and activities of the hypothetical person. The students, themselves, could expand the profile before starting the Game. This would give them a better understanding of the hypothetical person.
4. Several students felt restricted by the limits of the Game. For example, they felt the booklets listing educational opportunities were too limited. Information about local universities, colleges, and junior colleges could be added to the choices in the Game booklets to give the students a chance to learn more about schools they might want to attend in their locality. Also, information about local job opportunities could be added to inform students of possible jobs in their community.

In summary, the Life Career Game may a useful technique. If used, it would be a good idea to expand the profiles in an effort to make the hypothetical person more real. Since the Game is highly adaptable, the use of local educational and occupational information will provide more choices of a realistic nature for the students.

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## LE "JEU DE CARRIERE" ET LA PRISE DE DECISION CHEZ DES ETUDIANTS DE NEUVIEME ANNEE

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L'objectif de l'étude fut de déterminer l'effet de la participation au "Jeu de Carrière" sur quatre variables reliées à la prise de décision. Ces variables sont: a) la connaissance de l'importance des décisions de vie; b) l'activité d'exploration; c) le concept de soi; d) le concept des autres.

Trente-neuf sujets de neuvième année fréquentant l'Ecole Expérimentale de l'Université de Missouri participèrent à l'étude et furent assignés au hasard, soit à un groupe expérimental soit à un groupe témoin.

Les données indiquèrent que la participation au "Jeu de Carrière" eut des effets significatifs sur deux des quatre variables; l'activité d'exploration et le concept des autres.

L'A. observa, chez les étudiants, une diminution de l'activité d'exploration et une augmentation du concept positif des autres, tandis que chez les étudiantes, l'A. nota une augmentation de l'activité d'exploration (par rapport aux étudiantes composant le groupe-témoin) et une diminution du concept positif des autres.

Au cours de l'étude, diverses observations furent effectuées et les participants furent incités à formuler leurs réactions. De ces observations et réactions, l'A. présente un ensemble de suggestions visant à faciliter l'utilisation de cette technique.