

ANALYSIS AND SOCIAL VALIDATION OF A  
GROUP TRAINING PACKAGE FOR  
PRE-PROFESSIONALS WITH DEFICIENT  
JOB INTERVIEW SKILLS

CENTRE FOR NEWFOUNDLAND STUDIES

**TOTAL OF 10 PAGES ONLY  
MAY BE XEROXED**

(Without Author's Permission)

WENDELL GARY LADD





141045







## CANADIAN THESES ON MICROFICHE

I.S.B.N.

## THESES CANADIENNES SUR MICROFICHE



National Library of Canada  
Collections Development Branch

Canadian Theses on  
Microfiche Service

Ottawa, Canada  
K1A 0N4

Bibliothèque nationale du Canada  
Direction du développement des collections

Service des thèses canadiennes  
sur microfiche

### NOTICE

The quality of this microfiche is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us a poor photocopy.

Previously copyrighted materials (journal articles, published tests, etc.) are not filmed.

Reproduction in full or in part of this film is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30. Please read the authorization forms which accompany this thesis.

**THIS DISSERTATION  
HAS BEEN MICROFILMED  
EXACTLY AS RECEIVED**

### AVIS

La qualité de cette microfiche dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de mauvaise qualité.

Les documents qui font déjà l'objet d'un droit d'auteur (articles de revue, examens publiés, etc.) ne sont pas microfilmés.

La reproduction, même partielle, de ce microfilm est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30. Veuillez prendre connaissance des formules d'autorisation qui accompagnent cette thèse.

**LA THÈSE A ÉTÉ  
MICROFILMÉE TELLE QUE  
NOUS L'AVONS RECUE**

Analysis and Social Validation of a Group  
Training Package for Pre-professionals with  
Deficient Job Interview Skills

by



W. Gary Ladd, B.A. (Honours)

A Thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Science

Department of Psychology

Memorial University of Newfoundland

St. John's

Newfoundland



### Abstract

The study involved training five job interview skills deficient male co-op engineering students to increase three components of their verbal behavior that are considered important in the job interview. A simultaneous replication multiple baseline design was used to demonstrate experimental control of the various phases of the training program over the subjects' frequency of 1) asking the interviewer job relevant questions 2) verbally expressing his enthusiasm 3) providing positive information about his education and experience.

Each subject was videotaped while in structured interviews with a research assistant under conditions of 1) baseline 2) training on asking the interviewer job relevant questions 3) training on verbally expressing his enthusiasm 4) training on providing positive information about his education and experience.

Two trained research assistants, who had no knowledge of the purpose of the study, viewed all the above-mentioned tapes of the subjects in a random order and observed the frequency of the three target behaviors and three untreated concomitant behaviors. The concomitant behaviors were frequency of 1) eye contact with the interviewer 2) speech disturbances in subject's verbalizations 3) gestures used by subject.

In addition, one pre-training and one post-training interview was conducted in a different setting and with an unfamiliar, experienced interviewer for each subject. The pre- and post-training interview tapes were randomly arranged and two experienced personnel officers who had no knowledge of the purpose of the study were asked to view the tapes and rate the subjects on five subjective measures including likelihood of

hiring the subject.

The multiple baseline design provided for a test of experimental control over the three target behaviors and allowed for the demonstration of a substantial increase of the frequency of each target behavior upon the introduction of training. Overall, there was no change in the frequency of gestures or speech disturbances. The percentage of eye contact increased slightly following the first training session. Pre- to post-training improvements in interviews with an actual personnel officer were also noted in all five subjects. Two other personnel officers provided support for the social validity of the experimental training program by rating all subjects significantly higher following training on the five subjective measures including likelihood of hiring. Evaluation of the program by the five participants indicates that they all found the experience to be a valuable one.

In a subsequent co-op engineering program open job competition, three of the participants were hired on the basis of their job applicant interviews and a fourth was selected as the preferred candidate for a position but could not accept because of the candidate's self-imposition of a geographical location restriction.



### Acknowledgements

This thesis has not been a solo effort. It has required the assistance of numerous people. Firstly, I would like to thank my supervisor, Prof. Charles Preston, for his confidence in me, his gentle guidance, sparkling optimism and darn good advice! I would also like to thank the members of my thesis committee, Michael Stones and Elaine Davis, for their efforts.

Thanks are due to Peter Young, Director, and Cecil Power, Co-ordinator, Division of Co-ordination, Memorial University of Newfoundland, for their keen interest, support, and co-operation. The five students from the Bachelor of Engineering program who served as subjects for this project and the three personnel officers who gave hours of their time also receive my sincere thanks.

I am also grateful to the School of Graduate Studies and the Department of Psychology, Memorial University of Newfoundland, for the financial support that was provided.

Finally, I would like to thank my family and friends for giving me their encouragement, support, and even food and shelter when I always seemed to need it most.

## Table of Contents

Chapter		Page
1	Introduction	1
2	Method	
2.1	Subjects and Setting	14
2.2	Interviewers	16
2.2.1.	Structured Interviews	16
2.2.2.	Pre- and Post-Training Generalization Interviews	16
2.3	Judges	
2.3.1.	Behavioral Observations: Frequency of dependent measures	16
2.3.2.	Social Validation	17
2.4	Location and Apparatus	17
2.5	Procedure	18
2.5.1.	Training and Assessment of Experimental Subjects	19
2.5.2.	Assessment of Generalization of Training	22
2.5.3.	Social Validation of Study	23
2.5.4.	Subject Evaluation of Training	24
3	Results	
3.1	Data Analysis: Frequency of Dependent Measures	25
3.1.1.	Inter-rater Agreement	25
3.2	Effectiveness of Job Interview Skills Training	26
3.2.1.	Results for Individual Subjects	27
3.3	Generalization of Training	30



## Chapter

## Page

### 3.4 Social Validation

31

### 3.5 Subjects' Evaluation of Training Program

33

### 4 Discussion

34

### Reference Notes

40

### References

41

### Appendices

#### I. Explanation of the Division of Co-ordination's Rating and Matching Process

45

#### II. Job Interview Skills: Structured Interview Instructions and Questions

46

#### III. Job Interview Performance Rating Form

47

#### IV. Job Interview Skills Training Program Evaluation

48

## List of Tables

## Table

## Page

- 1 Group mean performance of subjects in pre- and post-training generalization interviews
- 2 Group mean performance of subjects in structured interviews
- 3 Results of job interview skills training program evaluation

50

51

52



## List of Figures

Figure		Page
1	Job interview skills training program: group mean frequency of target and concomitant behaviors in structured job interviews	53
2	Subject A: Frequency of target and concomitant behaviors in structured job interviews	54
3	Subject B: Frequency of target and concomitant behaviors in structured job interviews	55
4	Subject C: Frequency of target and concomitant behaviors in structured job interviews	56
5	Subject D: Frequency of target and concomitant behaviors in structured job interviews	57
6	Subject E: Frequency of target and concomitant behaviors in structured job interviews	58
7	Experienced personnel officers' "blind" evaluations of subject pre- and post-training generalization interviews on five subjective scales	59

Chapter 1 - Introduction



1

For someone seeking employment, the job interview can be considered to be a necessary and crucial step towards obtaining a position. This perceived importance is demonstrated by the proliferation of books directed at the job seeker which offer advice specifically on preparing for and dealing with the job interview (Robertson, 1978; Irish, 1978; Lalonde, 1980; Catalyst Staff, 1980).

Generally, career counsellors and placement officers perceive the job interview as important in the placement process; however, the type and quality of services available in placement offices and career centres varies considerably. It can range from pamphlets or information booklets (University and College Placement Association, undated; New York Life Insurance Company, undated; Canada Employment Centre on Campus: Vancouver Community College - Langara Campus, undated) to seminars and short courses on job placement and interviewing (Walker, 1974; Raanan & Lynch, 1974; Kiradjieff & Stimac, 1975; Schlossman, 1979).

Support for the importance of the interview in the placement process was provided in the results of a survey of 195 business firms (Drake, Kaplan & Stone, 1972). Eighty-one percent of the respondents reported they consider the interviewer's impression more important than the candidate's references, three-quarters considered the interviewer's impression to be more important than the candidate's resume and approximately sixty-one percent reported the interviewer's impression was a more important factor than specific training in deciding whether to hire a candidate.

Schmitt (1976) reports that the employment interview research literature repeatedly concludes that the interview, as employed in many hiring situations, can be unreliable. Further, the validity of the

selection interview is questionable since it is considered a poor and inconsistent predictor of an individual's job success (Babcock & Yaeger, 1973).

In spite of the various criticisms which have been made, the interview continues to be a popular selection tool (Schmitt, 1976) and it appears to be the principal method used for making hiring decisions (Clowers & Fraser, 1977). Therefore, understanding the factors which account for interview outcome is important for those people who are in a position of providing assistance to people seeking employment.

After reviewing the social and industrial psychology literature on the employment interview, Schmitt (1976) identified several major classes of variables which he considers have some relationship to interview outcome. Schmitt contends that each person's behavior is the result of the influence of a number and variety of individual, cultural and situational variables. The outcome of an interview is seen to be determined by the interaction of the interviewer's appearance and behavior. Interviewer and interviewee background variables such as sex, age, race and social-economic status have been found to be related to outcome. This may be because of their influence on attitude, motivations, perceptions and expectations which, in turn, influence both interviewer and interviewee behavior and decisions. It is also suggested that the amount of experience an individual has, the amount of information he/she has about the job, the type and level of the position and situational variables such as the current job market, can also influence the behavior of both the interviewer and the interviewee, thus influencing the interview outcome.

The importance of the interviewee's behavior and the



consequent attribution of certain characteristics and attitudes as a major factor in determining interview outcome has been supported in several studies. Pate and Harwood (1974) reported that characteristics such as an individual's verbal communication skills, spirit, motivation, self-confidence, self-evaluative ability, interest in the hiring organization and awareness of the job market are all evaluated on the basis of actual interview behavior. Tschirgi (1973) reported that surveyed employers listed communication skills demonstrated in the interview as the most important factor in evaluating the candidate for employment. Similarly, Drake et al.'s (1972) survey found that 73.8% of the corporate representatives solicited considered candidates' inability to communicate to be the most important factor contributing to a negative hiring decision. In their review of the employment literature, Gowers & Fraser (1977) concluded that while current social trends and the type and level of position sought affected the types of characteristics interviewers look for, the applicant's communication and interpersonal skills are of central importance in the hiring process.

Job interview skills training is one application of a theoretically based approach to human problems referred to as social skills training. "Social skill" has been defined as "the complex ability both to emit behaviors that are positively reinforced and not emit behaviors that are punished by others" (Libet & Lewinsohn, 1973, p.304). Maladaptive behavior is considered in terms of the absence of specific response skills. When inability to obtain employment is construed as a deficiency of specific skills which are necessary to relevant situations, then the objective of treatment is to provide clients with direct training in those skills that they do not presently

possess in their behavioral repertoire (Twentyman & Zibering, 1979).

Hollandsworth, Kazelskis, Stevens, and Dressel (1979) point out that the research on job interviews has progressed from describing behavior in global terms, i.e. communication or interpersonal skills, to identifying specific behaviors such as eye contact. Recognizing the importance of candidate behavior and its potential to influence the hiring decision, researchers have developed training models which are intended to assist clients in changing behaviors which are important to the interview. Prazak (1969) developed a model for assessing job seekers interview skills in which he identified five critical areas that he considered necessary for an individual to demonstrate skillful interpersonal behavior in order to obtain a favourable outcome. The candidate must be able to explain relevant work skills, answer problem questions and express enthusiasm for the position being applied for. In addition, it is necessary to open and close the interview appropriately, and one's appearance and mannerisms should be appropriate.

Specific applicant behaviors and their contribution to interview outcome should be an area of significant research. Because the social skills approach focuses directly on the modification of specific behaviors considered important in the job interview, trainers need to have an understanding of the relative contribution the various behaviors make towards a favourable hiring decision. In their development of an objective behavioral rating scale, the Interview Rating Scale, Venardos and Harris (1973) identified twenty-six specific behaviors they considered crucial to the success of the interview. Similarly, Matthews, Whez, and Fawcett (1980) conducted a task analysis on participating in a job interview and yielded a sequence of twenty-nine discrete behaviors they considered important.



Hollandsworth, Kazelskis, Stevens, and Dressel (1979) have suggested that applicant job interview behavior should be conceptualized as involving three overt dimensions: verbal, articulative and nonverbal. Articulative or vocal phenomena such as fluency of speech and loudness of voice are differentiated from the actual content of the applicant's verbalizations. Eye contact and gestures are examples of nonverbal communication. The relative contribution of behavior from each of the communicative dimensions has been a subject of increased debate. Several studies have demonstrated the influence of appropriate nonverbal and articulative communication on interview ratings (Young & Beir, 1977; Inad & Hakel, 1977; McGovern & Ideus, 1978) but Hollandsworth, Kazelskia, Stevens, and Dressel (1979) have questioned the validity of these findings. They point out that such studies used simulated interviews with the verbal content held constant across conditions rather than having personnel recruitment officers rate "real" or actual interviews. They investigated this issue by performing a discriminant analysis on recruiter ratings of 338 on-campus job interviews. A behaviorally anchored evaluation scale was used to rate candidates on seven types of communication with each type representing one of the verbal, articulative and nonverbal dimensions. An eighth item on the scale asked recruiters, "Would you hire this candidate?" They reported that the appropriateness of one's verbal content, i.e. what you actually say, was the single most important variable. Being able to speak fluently and appearing relaxed and at ease in the interview were also important. Eye contact, body posture, loudness of voice, and personal appearance, respectively, each had an influence on the decision, but to a lesser degree.

In recent years increased attention has been devoted to the development of behaviorally based job interview skills programs. Azrin,

Flores, and Kaplan's (1975) Job Finding Club used a buddy system, family support and instruction in job search techniques and interview skills to effectively assist unemployed individuals. Ninety percent of the participants had found employment within two months as compared to only fifty-five percent of those in a control group who did not receive assistance.

Sandifer and Hollandsworth (Note 4) developed a training model which has been used in a variety of secondary and post-secondary settings. It utilizes a combination of techniques such as guided discussions, modeling and role playing to improve students' skills. It focuses on applicant verbal content, articulation, and nonverbal communication and was designed to be offered in either a large or small group format in a single three to four hour session. Questionnaires directed both to counsellors trained in the use of this model and also to workshop participants utilizing this model indicated high degrees of satisfaction (Hollandsworth & Sandifer, 1979). However, Hollandsworth, Dressel, and Stevens (1977) question the adequacy of such a workshop for students with marked skill deficiencies. The authors note that in the study in which the Sandifer and Hollandsworth workshop model was developed, subjects who merely wanted to improve already adequate interview skills were probably overrepresented. The subjects for the study were solicited from Business Administration and Nursing classes rather than being specifically referred for, or identified as being in need of, assistance.

Improving the opportunities for employment of people who have traditionally found it difficult to obtain a job because of a specific problem, disadvantage, or disability whether physical, psychological, or cultural/social in nature has been a major concern for social skills trainers, and a number of efforts have been reported.



The increased employment rate of ex-heroin addicts who participated in an eleven-hour workshop designed to improve job seeking and interview skills is reported in two recent studies (Hall, Loeb, Coyne, & Cooper, 1981; Hall, Loeb, LeVois & Cooper, 1981). Experimental programs utilizing a social skills approach for the improvement of job interview related skills have been successfully used with culturally disadvantaged people (Barbee & Kail, 1973); rehabilitation clients with physical, emotional, and mental handicaps (Venardos & Harris, 1973); predelinquent residents of an adolescent treatment centre (Braukmann, Fixsen, Phillips, Montrose, & Maloney, 1974); psychiatric patients (Furman, Geller, Simon, & Kelly, 1979; Kelly, Laughlin, Claiborne & Patterson, 1979); and mentally retarded individuals (Kelly, Wildman & Berler, 1980; Hall, Sheldon-Wildgen, & Sherman, 1980).

Hollandsworth, Glazeski, and Dressel (1978) used a multiple baseline design to demonstrate experimental control of the deficient verbal skills of an extremely anxious underemployed recent college graduate. In addition to the improvement of the targeted behaviors as training progressed, there was a corresponding decrease in the number of speech disturbances the subject emitted. His galvanic skin response (GSR), monitored during actual job interviews, decreased during an interview conducted after training whereas it steadily increased during an interview monitored prior to training. Unobtrusive observers' ratings of the subject prior to and following training indicated an improvement in other untrained areas such as eye contact, composure and personal appearance; however, these were not monitored during training.

Ideally, the content of training programs should be tailored to the response characteristics of the population or the individual requiring assistance. Hollandsworth, Glazeski, and Dressel's (1978) report

demonstrates that intensive individual training can produce significant change. However, Kelly (1980) has commented that practical necessity often makes it necessary for social skills training to take place in groups because of the demand for services and the finite human resources available in most clinical and applied settings to meet this demand. Based upon the previously summarized findings of Hollandsworth, Kazelskis, Stevens, and Dressel (1979), it might be concluded that even though verbal content is the most influential candidate behavior variable, it would be useful to provide specific training on relevant behavior from each of the communicative dimensions when assisting clients who experience serious interview skill deficiencies.

The major or sole emphasis of training in many of the recently published experimental programs for disadvantaged clients has been on candidates' verbal content. Studies by Hollandsworth et al. (1978) and by Kelly, Laughlin, Claiborne, and Patterson (1979), and Kelly, Wildman, and Berber (1980) focused solely on verbal communication. Furman, Geller, Simon, and Kelly (1974) devoted eighty percent of their program's training time to improving verbal behaviors. The success of the Hollandsworth et al. (1978) program has already been detailed. Each of the other studies also demonstrated an ability to improve job interview related skills. In addition, personnel recruitment officers' ratings of subjects on several subjective scales including "likelihood of hiring" indicated that the improvements were of practical importance. Unfortunately, monitoring of concomitant behaviors has only been conducted to a limited extent. One single subject study (Hollandsworth et al., 1978) monitored the frequency of applicant speech disturbances. One of the subjects in the Furman et al. (1979) study and each of the six subjects in the Kelly et al. (1979) study had the total number of informational facts



they verbalized monitored.

While interview training must often be done in a group, a substantial number of the social skills training experiments use a single subject multiple baseline design (Braukmann et al., 1974; Hollandsworth et al., 1978; Furman et al., 1979; Hall et al., 1980). Treatment is sequentially applied across subjects or component behaviors, thus enabling demonstration of experimental control of changes in the targeted skills. Kelly (1980) asserts that "it is crucial to determine empirically whether treatment derived from single subject training will prove effective when translated into cost efficient group training procedures" (p.204). Further, he criticizes "between group" designs for not providing valuable information on individual subject's response to group treatment.

Two recent studies used a simultaneous replication design in their experimental treatment study of social skills deficits (Kelly et al. 1979; Kelly et al. 1980). Basically, the performance of several subjects was individually assessed prior to and following sequential training of each skill component as in a multiple baseline across behavior design for a single subject but the actual training was conducted in a series of groups rather than on an individual basis. To illustrate:

...job interviewing skills were taught to a group of six subjects. Each subject was first individually assessed over three role-played job interviews to establish baseline deficiencies in his/her ability to handle pre-employment interviews. Group treatment was then initiated. During the first three training groups, one class of job interview skills (asking relevant questions) was targeted to group treatment using a modeling-instructions-rehearsal procedure. Thus, all group members received identical

training exposure and, immediately following each group session, individual role-plays of job interviews (identical to those of baseline) were repeated for each subject.

The utility of this design in applied clinical settings has been discussed by Kelly (1980):

...by analysing the social skills behavior change effects of a group treatment procedure, it is possible to demonstrate more compellingly cost-or-time-effectiveness than if such subject had been labouriously handled as an individually treated case study using single subject procedures. ...Since data for each subject in the training group is individually measured and graphed, each subject also serves as a 'simultaneous replication' for the training procedure and provides important information on the generality (or specificity) of the treatment. To examine training effects across subjects, standard tests of statistical significance may be employed. Finally, the use of controlled single group methodologies would permit the multiple subject follow-up, outcome and generalization data base that single subject designs cannot permit (pp.206-207).

One area of major concern for the social skills researcher is whether or not changes in targeted behaviors are of any practical social significance or value. The quantification of the clinical significance of changes made during treatment has been one of the primary objectives of applied behavior analysis since its inception (Baer, Wolfe, & Risley, 1968). Simply demonstrating changes in discrete behaviors does not address this issue. Different types of social validation have been described (Walker, Hops & Johnson, 1975; Minkin, Brankmann, Minkin

Timbers, Timbers, Fixsen, Phillips, & Wolf, 1976; Kelly et al. 1979; Spence, 1981). For job interview skills training the most appropriate way of validating the social importance of behaviors and behavior change is the "critical other" method. For example, personnel recruitment officers were used by Hollandsworth et al. (1979) to identify the relative importance of various applicant behaviors and also to determine whether treatment effects were considered to be of any real significance or practical importance by the interviewers. Kelly et al. (1979) described a procedure where the practical value of training changes is assessed by having personnel officers "blindly" rate recordings of subjects' performance in interviews conducted prior to and following training.

Kelly (1980) has pointed out the importance of controlled treatment evaluation in applied settings. In application, training programs must often operate with limited time and professional resources; therefore, it is necessary to develop and evaluate programs which are more cost and time efficient. The research of Kelly et al. (1979) and Kelly et al. (1980) is significant because both studies demonstrated that a group training procedure focusing solely on improving the verbal content of applicant behavior was effective with populations that find it difficult to obtain employment. Further, both studies reported that personnel interviewers considered the improvement to be of significant practical importance as measured by a "likelihood of hiring" scale.

The present study will utilize the simultaneous replication design to assess the applicability of a group skills training approach to a population of pre-professionals with deficient job interview skills. It will feature a) training on the three verbal skills targeted by the Kelly et al. (1979) and Kelly et al. (1980) studies b) a reduction in the amount of training time used in comparison to the reported programs for



other skill deficient populations which have a more limited learning ability c) economy in the use of professional human and technical resources.

Secondly, the present study will attempt to begin to fill the need for a more comprehensive assessment of treatment effects when training efforts focus solely on improving subjects' verbal skills. The paucity of literature assessing the differential effects of content oriented training on concomitant behavior limits the extent to which changes in verbal content can be held responsible for improved employability. In addition to the three target behaviors, three concomitant behaviors will be monitored prior to, during, and following the training program. Finally, an attempt will be made to improve on the social validation procedure reported in Kelly et al. (1979) and Kelly et al. (1980) by having personnel recruitment officers rate subject interview performance on the basis of videotaped recorded pre- and post-training interviews instead of audiotape recorded interviews.

In summary, the present study will test the following hypotheses:

1. The target behaviors will increase in frequency only as a consequence of specific training. The designated target behaviors are (i) number of job relevant questions to interviewer, (ii) positive information to interviewer about experience and education, (iii) verbal expressions of enthusiasm.
2. Training will not result in significant change in the frequency of the untrained concomitant behaviors, (i) gestures, (ii) eye contact, and (iii) speech disturbances.
3. The increased frequency of the trained target behaviors

will generalize to an interview conducted outside of the laboratory by an unfamiliar, experienced interviewer.

4. An experienced personnel recruitment officer will increase the favourability of his ratings of the subjects on various measures from pre- to post-training.

## Chapter 2 - Method



## 2.1. Subjects and Setting

The five subjects selected for this experiment were Bachelor of Engineering students at Memorial University of Newfoundland. "The Bachelor of Engineering Degree at Memorial University is set up as a Co-operative Program, under which regular full time academic study is alternated with equal periods of full time work in positions related to the student's future career" (Memorial University of Newfoundland Calendar, 1980-81, Note 5, p.333).

The Co-op Program is managed by the Division of Co-ordination and provides liaison between the students, the employers and the university.

The Division, through its co-ordinators is responsible for assisting potential employers to become involved in the (co-op) program; for the continual development of employment opportunities; for arranging student/employer interviews; for counselling of students and visiting them on their work assignments; and together with the employers and faculty for the evaluation of the student's work performance. (Information for Students in the Co-op Programme: The Job Competition, Note 6, p.5).

The Division of Co-ordination tries to obtain employment opportunities which will be a significant part of the student's education and appropriate to the student's academic level. Students and employers choose each other through the Division's placement process, referred to as the "Job Competition." Basically, positions which have been solicited by the Division's co-ordinators are bid on by students through the submission of a letter of application and a resume to each employer for whom they would like to work for. After screening the applicants each employer arranges to interview those students in whom he is interested. Interviews are normally held on campus in the Co-ordination Division offices. Interviews take an average of twenty minutes each. After interviews have been completed, both students and employers rate each other

in order of preference. Students and employers are matched on the basis of this information. An explanation of the mechanics of the rating and matching process is given in Appendix 1.

A co-op program co-ordinator, in consultation with the Division Director, referred students for job interview skills training who, in their judgment, had performed very poorly in job interviews because of a lack of necessary social skills in this situation rather than any identified behavior or emotional problems. They based their decisions on their own personal experiences interviewing the students for a variety of purposes and on the student's performance in the Job Competition that had been held for placement in their first work term. The students were told that the experimenter was exploring methods to improve interview performance in job interviews and needed their assistance as subjects. All of the five students who were referred agreed to participate.

All of the subjects were in their third academic term of their engineering degree program. All had completed one work term, although none had been matched in their first Job Competition. Consequently, their first work term placement had to be found through a process of individual counselling and employer solicitation after the completion of the competition. All had had a minimum of two unsuccessful interviews in their Job Competition, even though they were considered to be employable and to possess adequate and appropriate university training. The mean cumulative academic standing for the students' academic terms one and two was 71.7 (Range: 64.8 to 79.5) on a one hundred point scale. All subjects were male, nineteen years of age, and resided in the St. John's, Newfoundland, metropolitan district.

The experimental job interview skills training program began approximately six weeks prior to the start of the Job Competition for the

students' second work term placement.

## 2.2. Interviewers.

2.2.1. Structural Interviews. During the training phase of the experiment each subject was required to participate in structured job interviews.

These interviews were conducted by a research assistant who was not told the exact nature of the experiment; the experimenter explained only that he was doing research on the performance of university students in job interviews. The research assistant was instructed to follow the "Job Interview Skills: Structured Interview Instructions and Questions" described in Appendix II.

2.2.2. Pre- and Post-Training Generalization Interviews. A personnel officer from a large local firm, experienced in conducting employment interviews with university students, conducted a simulated job interview prior to, and after, the completion of the training program. He was instructed to conduct the interviews as he would if the subjects were actually applying for a job with his firm. For the post-training generalization interviews, he was instructed to treat these as if he had never interviewed the subjects before and to conduct himself, as much as possible, in the same manner as he had in the pre-training interviews. The experimenter explained only that he was doing research on improving the performance of university students in job interviews.

## 2.3 Judges

2.3.1. Behavioral Observations: Frequency of dependent measures. Two additional research assistants, Bachelor of Science (Honours) Psychology students, with prior experience in making behavioral observations, counted the frequency of the target and concomitant behaviors using videotapes of structured, and pre-, and post-training interviews. One research



assistant observed 100% of the interviews and the second one observed 40% of them. Both research assistants were taught the response definitions of the dependent measures and given examples of responses to be rated. They were not informed of the exact nature or purpose of the experiment. The experimenter explained only that he was doing research on the performance of university students in job interviews. They were not told which behaviors were being trained or when training of each specific target behavior was implemented.

2.3.2. Social validation. Videotapes of the pre- and post-training generalization interviews were presented in random order to two other personnel officers who were experienced in conducting employment interviews with college students. Both personnel officers independently rated the subject in each interview on five subjective scales. The experimenter explained only that he was doing research on the performance of university students in job interviews. A sample of the form used by the personnel officers to rate each of the generalization interviews is shown in Appendix III.

#### 2.4 Location and Apparatus

All training sessions were conducted in a 19 x 21 ft. (5.8 x 6.4 m.) Engineering Department seminar room containing a blackboard, a table, and chairs. During the instruction/discussion and brainstorming components of the sessions the chairs were arranged in a semi-circle around the blackboard. For the skill practice component, the table separated two chairs that faced each other. The remainder of the chairs were scattered to either side of the seat occupied by the trainer who role-played an interviewer.

The structured interviews were conducted in a room which was

converted into a videotape recording studio for the duration of the training sessions. It was located beside the room used for the training sessions. The interviews were held in a 10 x 15 ft. (3.1 x 4.6 m.) area which was separated from the rest of the room by sound retarding dividers. The research assistant sat behind a table with the subject sitting in a chair facing him approximately seven ft. (2.1 m.) away. A black and white video camera was positioned approximately eighteen in. (46 cm.) to the left of the research assistant's head and was focused directly on the interviewee only. A single microphone was placed on the table, approximately four ft. (1.2 m.) away from the subject and three feet from the research assistant.

For the pre- and post-training generalization interviews, each subject reported to the Co-ordination Division secretary at his appointed time and was conducted from the reception area to a 10 x 14 ft. (3.1 x 4.3 m.) office. It contained a desk, telephone, filing cabinet, chairs and bookshelves. The interviewer (personnel officer) sat at the desk with the interviewee seated in a chair facing him across the desk. The location of the recording equipment was identical to that described for the structured interviews.

All structured and pre- and post-training generalization interviews were recorded on a total of twenty-nine Memorex UCA 60 video cassettes using a Concord TCM-20 camera, a Shure SM-57 microphone and a Sony VO26N recording deck. The recordings of the interviews were viewed by the research assistants and personnel officers on a Sony CVM 194 nineteen-inch monitor.

## 2.5 Procedure

The procedure for this study is divided into three major sections:

- (1) Training and assessment of experimental subjects including the

identification and operational definitions of response measures, (2) Assessment of generalization of training, (3) Social validation of training.

2.5.1. Training and Assessment of Experimental Subjects. A multiple baseline across behaviors design was used to demonstrate experimental control of the target behaviors. Three job interview skills were introduced in a sequential and cumulative fashion.

2.5.1.A. Training session format. A single training session on each target skill was held at weekly intervals for a period of three weeks. Training was sequentially instituted on the three target behaviors: (1) asking the interviewer job relevant questions in order to learn more about the position and convey interest, (2) verbally expressing interest and enthusiasm in the prospective position, (3) providing positive information to the interviewer about education and previous experience. Asking questions was targeted for the first session, expressing enthusiasm and interest for second session, and providing positive information the third session.

Training was conducted in a group and each session lasted approximately one hour and fifteen minutes. The job interview skill component targeted for the operative training session was identified. The group received instruction from the experimenter and was engaged in a group discussion on the importance of engaging in the target behavior in the job interview situation (Instruction/Discussion Component). Then, the experimenter had the group generate as many examples of the target behavior as they could (Brainstorming Component). A behavior rehearsal period (Skill Practice Component) was then conducted in the group with the experimenter asking each of the subjects interview questions similar to those which were used in the later individual structured job interviews.



Subjects were instructed to practice engaging in the targeted skill during this in-group rehearsal and they received corrective advice and verbal reinforcement from the experimenter for appropriately exhibiting the skill. (Kelly et al. 1979, p.304).

The subjects observed each other engaged in these in-group rehearsals and offered feedback to their fellow subjects based upon their performance. Thus, within the group itself, all subjects rehearsed their responses to simulated interview questions directly asked them by the experimenter. (Kelly et al. 1979, p. 304).

2.5.1.B. Structured interview format. An interview script based on Furman et al. (1979), Kelly et al. (1979) and Kelly et al. (1980) was used to assess the performance of participants during each phase of the training. Ten questions that an interviewer might ordinarily direct to a candidate in the course of an employment interview were used. The specific questions used are listed in Appendix II. They were selected from a workshop model by Sandifer and Hollandsworth (Note 4) and Marketing Yourself (Catalyst Staff, 1980). Each interview was handled in an identical manner throughout the training phase of the study.

The participant was escorted to (the recording studio) where the interviewer was seated. The participant sat down and was asked each of the ten questions by the interviewer. Questions were asked one at a time and in the same order during each interview. Following reply, the interviewer summarized or acknowledged the response in one sentence. After an eight second silence, the interviewer asked the next questions from the script. (Kelly et al. 1980, p. 464).

Each interview was videotaped for later scoring of the frequencies of the target and concomitant behaviors.

2.5.1.C Baseline condition. In order to establish a baseline rate, a series of four structured interviews was conducted with each subject prior to the introduction of training of any of the target behaviors. Subjects were told that during this phase of the program the experimenter wanted to videotape their interaction with a previously unknown interviewer

for observational purposes so that he could see what skills needed improvement. The research assistant interviewed each subject for a position identified as similar to one they would be trying to obtain in the next Job Competition. Each subject was told to do his very best and not to talk to the interviewer about the experiment or the video camera during the interviews.

2.5.1.D Training on questions to interviewer. Kelly et al. (1979) defined this response as questions directed to the interviewer by the subject which were job relevant. Examples: "What does this position pay?", "Will I be able to work overtime?", "When can I expect to hear from you?", (Kelly et al. 1979), "What would the job entail?", "What fringe benefits does the company offer?" (Furman et al. 1979). This definition was adhered to in the present study, and the objective of training was to increase the frequency of the subjects' use of such questions.

2.5.1.E. Training on verbal expressions of enthusiasm and interest. This was defined by Kelly et al. (1980) as "any declarative statement indicating current interest in the position, rather than a statement of past experience." Examples: "I am extremely interested in this job", "This sounds like a very challenging position", "I am very eager to begin work", "I think my qualifications will enable me to do a good job with your company". This definition was adhered to in the present study and the objective was to increase the frequency of the subjects' use of such statements.

2.5.1.F. Training on positive information about education and experience. This response was defined as positive, evaluative comments about the subject's past experience or educational background. Statements had to convey information that was positive in nature and clearly relevant to employment (Furman et al. 1979). Examples: "My former employer will



recommend me if you wish to call him/her", "I've had two courses in Mechanical Engineering", "I have a Class 1 driver's licence". This definition was adhered to in the present study, and the objective of training was to increase the frequency of the subjects' use of such statements.

2.5.1.G. Post-skill training structured interviews. A series of three structured interviews was conducted by the interviewer (research assistant) for each subject during the six days following the group training session held on each target behavior. The same procedure was used as was described in the section where the format of the structured interviews is detailed. (See section 2.5.1.B.).

2.5.1.H. Identification and operational definition of concomitant behaviors. The following three concomitant behaviors were not selected as target behaviors for training but were monitored for all structured, and pre-, and post-training generalization interviews:

(i) Gestures. A gesture was defined as a minimum twelve inch (30 cm.) movement of one or both arms which accompanied a verbal statement.

(Furman et al. 1979).

(ii) Eye contact. Eye contact was defined as the subject's looking at the interviewer (Braukmann et al. 1974).

(iii) Speech disturbances. Speech disturbances were defined in terms of the eight categories described in detail by Mahl (1956). The categories were: sentence corrections, "ahs", repetitions, incoherent sounds, stuttering, incomplete sentences, slips of the tongue and the omission of words or parts of words.

2.5.2. Assessment of Generalization of Training. An interview was conducted with each subject by an experienced personnel officer one week



prior to the commencement of and one week following the completion of training. The interviews were videotape recorded and rated by trained research assistant observers on each of the six dependent measures. This procedure was carried out to assess the generalization of the learned skills to an interview with an unfamiliar, experienced job interviewer who was not asking the same questions, using the same format, or the same physical space that was used in the training sessions and structured interviews. Subjects were told prior to both their pre- and post-training generalization interviews that these were "practice" interviews and that they should do their best (Kelly et al. 1980). The trained observers were "blind" as to whether a particular interview occurred prior to or following training. The recordings of the interviews were rated using the same operational definitions which were used for the structured interviews. (See sections 2.5.1.D,E,F,H).

2.5.3. Social Validation of Study. Two other personnel officers individually rated the videotape recordings of all the subjects' pre- and post-training generalization interviews.

For each participant's pair of tapes, the order (pre- or post-) in which the (officer viewed) then was randomly determined. In order to eliminate the likelihood that a judge would compare an applicant's pre- and post-training tapes before rating them, the (officer) was always asked to evaluate the first interview which he (viewed) before judging the second interview by the same applicant. (Kelly et al. 1980, p.466).

The judges were asked to evaluate the interview performance of the subjects shown on the videotapes on a seven point bipolar scale where 1 = poor and 7 = excellent. An evaluation form was used to evaluate each subject on the following criteria: 1) Applicant's previous experience and education, 2) Applicant's real interest in working, 3) How 'well rounded' the applicant's personality is, 4) Applicant's competence and ability to

succeed at the position offered, 5) Applicant's likelihood of being hired.

2.5.4. Subject Evaluation of Training. After the post-training generalization interview each subject was asked to fill out a "Job Interview Skills Training Program Evaluation" form adapted from Sandifer and Hollandsworth (Note 4). Subjects were asked to rate each section and component of the program on a four point scale: "very helpful", "somewhat helpful", "of little value", "of no value". A sample of the program evaluation form is given in Appendix IV.

### Chapter 3 - Results



### 3.1. Data Analysis: Frequency of Dependent Measures

The frequency of speech disturbances, gestures, job-relevant questions to interviewer, and positive information about education and experience was obtained using an event recording technique (Sulzer-Azaroff and Mayer, 1977). The number of times each behavior occurred in an interview was recorded by a trained observer. For speech disturbances, a rate/minute ratio was calculated by dividing the number of disturbances by the length of time the subject talked (Hollandsworth et al. 1978).

The time-talked measure was separately recorded by using a stop-watch to accumulate the total time spoken by each subject during each interview.

The frequency of eye contact was obtained using an interval time-sample recording technique called a momentary time-sampling system (Sulzer-Azaroff and Mayer, 1977). An audio tape which indicated five second intervals (Braukmann et al. 1974) was synchronized with each videotaped interview. If the behavior was occurring at the moment the interval ended, it was recorded by a trained observer on a recording sheet containing one box for each interval. The percentage of eye contact in each interview was calculated by dividing the number of intervals at the end of which the behavior had occurred by the total number of intervals.

3.1.1. Inter-rater Agreement. A second trained observer independently recorded the frequency of each of the behaviors in the pre- and post-training generalization interviews and thirty-one percent of the structured interviews randomly selected from each phase of the training program.

Reliability of the eye contact measurement technique was assessed by calculating a coefficient of agreement between the two observers' independent scoring of the occurrence of behavior. This reliability check was done by taking the total number of instances in which there was agreement that the behavior occurred and dividing it by the total number of

instances of agreement and disagreement that the behavior occurred. The inter-rater reliability for eye contact was .96.

The reliabilities of the frequencies of the behaviors measured using event recording were calculated using two different methods. First, a conventional method of calculating inter-rater agreement (Sulzer-Azaroff and Mayer, 1977; Kelly, 1977) was employed. For each behavior, the number of instances recorded by each observer was summed; the smaller frequency was divided by the larger frequency, and the quotient was multiplied by 100 to yield a percentage of agreement (Repp, Deitz, Boles, Deitz and Repp, 1976). The inter-rater reliabilities were: .98 on gestures, .98 on speech disturbances, 1.00 on questions, .99 on enthusiasm and .99 on positive information. Second, a procedure advocated by Hartmann (1977) and reported in Furman et al. (1979) and Kelly et al. (1980) was employed. Pearson product-moment correlations between observers' reported frequency of occurrence of each behavior were calculated. Using this method, the inter-rater reliabilities were: .99 on gestures, .99 on speech disturbances, 1.00 on questions, .99 on enthusiasm and .99 on positive information. Since all the reliability coefficients met or exceeded the conventional standard, it was considered acceptable to proceed with the analysis of the various measures.

### 3.2 Effectiveness of Job Interview Skills Training

Figure 1 illustrates the group mean frequency of occurrence of the three target and the three concomitant behaviors in structured interviews in each of the four conditions of the multiple-baseline design: (1) baseline, (2) following training on asking-the-interviewer-job-related-questions, (3) following training on verbally-expressing-enthusiasm and interest-in-the-position, and (4) following training on conveying-



positive-information-about-education-and-experience. Figures 2-6 present the frequency of occurrence of these dependent measures for each participant. Inspection of Figures 1 and 2-6 support this study's first hypothesis. The multiple-baseline-across-behaviors-design demonstrates experimental control of the three target behaviors. (1) Job relevant questions to interviewer, (2) verbal expressions of enthusiasm and interest, (3) positive information about experience and education, by showing that the frequencies of each increased only when each behavior was separately and sequentially trained and not before.

---

Insert Figure 1 about here

---

Hypothesis 2 stated that the training would not result in a significant change in the frequency of occurrence of the untrained concomitant behaviors. Review of Figure 1 shows that there was no overall change in the frequency of occurrence of either gestures or speech disturbances; however, the mean percentage of eye contact increased approximately 15% after the first training session and remained stable at that level. The section that follows details each subject's response to training.

3.2.1. Results for Individual Subjects. Figure 2 (Subject A) shows that in the structured interviews there was no increase in any of the measured behaviors during baseline. There were dramatic increases in the number of questions asked and the number of expressions of enthusiasm, and also a moderate increase in the number of expressions of positive information, following the training sessions held on each of these respective behaviors. The percentage of eye contact gradually increased 10 - 15% after the initial training session and remained stable for the



remainder of the interviews. Although there was no marked increase in the rate (occurrences/minute) of speech disturbances, there was some increase in variability after the first session. There was an incidental increase in the number of gestures used in the interviews which immediately followed the first and third training sessions, but in both instances the frequency quickly returned to the basal level.

-----  
Insert Figure 2 about here  
-----

Figure 3 shows no increase in any of the measured behaviors of Subject B during baseline. There was an increase in the frequency of each of the three target behaviors following the training session on each of these behaviors. The number of gestures stayed at the zero level in all of the structured interviews. In the interviews that followed the first training session, eye contact increased by 20 - 25% and remained stable at this new level while rate of speech disturbances declined slightly.

-----  
Insert Figure 3 about here  
-----

Figure 4 demonstrates that Subject C had an increase in the three target behaviors following the relevant training session but not before. The data reflect some evidence of deterioration in the use of questions and verbal expressions of positive information. The three concomitant behaviors were relatively stable across the four phases of the training program.

-----  
Insert Figure 4 about here  
-----

The performance of Subject D in the structured job interviews is displayed in Figure 5. There was a moderate increase in the use of questions and a dramatic increase in expressions of enthusiasm and positive information, contingent upon the group training held on each of these respective behaviors. The percentage of eye contact was stable throughout the four phases of the program. Before the first group training session no gesturing was observed in any of the subject's interviews, however, following this there was a moderate but highly variable use of gestures. Until the second training session the speech disturbance rate had been gradually declining. It then increased substantially for a two-interview duration before stabilizing at the same level as had been observed in the initial interviews.

---

Insert Figure 5 about here

---

Figure 6 demonstrates that Subject E had no increase in any of the dependent measures during baseline. The subject's verbal expression of interest and enthusiasm was good during baseline and improved substantially following the group training session on this behavior. The number of questions asked in the interview increased following training on this behavior. The number of expressions of positive information also increased but was followed by some deterioration. Eye contact was quite stable throughout, the use of gestures was highly variable in all phases of the training program and the speech disturbance rate in the structured interviews started to increase gradually after the initial training session.

---

Insert Figure 6 about here

---

### 3.3 Generalization of Training

Hypothesis 3 stated that the increased frequency of the trained target behaviors would generalize to an interview conducted at the Division of Co-ordination by an unfamiliar, experienced interviewer. Table 1 presents the group mean frequency of each target behavior in the pre- and post-training generalization interviews with the personnel officer. Table 2 presents the average across structured interviews of the group mean frequencies of each target behavior both prior to and following training on each target behavior, as rated by the research assistants.

---

Insert Table 1 and Table 2 about here

---

A comparison of the frequencies of the target behaviors reported in Table 1 and Table 2 produces the following results: the five-subject group mean for questions asked in the pre-training generalization interviews was 3.4, whereas it was 3.2 in the structured interviews held before training on this behavior. Subjects asked a mean of 7.9 questions in the structured interviews that followed training on asking questions and 7.6 questions in the post-training generalization interview. Subjects made a mean of 2.8 expressions of enthusiasm in the pre-training generalization interview and 3.9 in the structured interviews before training on this behavior. Following training, a mean of 11.9 expressions of enthusiasm were made in the structured interviews and 7.0 on the post-training generalization interview. Subjects made a mean of 1.0 positive statements about their education and experience in the pre-training generalization interview and 1.9 in structured interviews held prior to training on this behavior. They made a mean of 7.4 positive statements in



the structured interviews following training and 9.0 in the post-training generalization interview.

Table 1 also summarizes the results of a series of t-tests for correlated samples, employed in order to test the statistical significance of the difference between the pre- and post-training generalization interview frequency counts for each of the three target behaviors. The pre/post score differences were significant at the  $p < .01$  level for questions to interviewer and positive information about education and experience, ( $t = 4.28$  and  $t = 4.00$ , respectively). The pre/post difference for expressions of enthusiasm and interest was significant at the  $p < .025$  level ( $t = 2.81$ ).

Clearly, hypothesis 3 is supported by the above results.

Table 1 also presents the results of a series of t-tests for correlated samples used to test the statistical significance of pre/post differences on the three concomitant behaviors in the generalization interviews. The differences were not significant for gestures ( $t = 1.75$ ) or speech disturbances ( $t = 0.38$ ). In the case of eye contact, however, because there was a significant difference between pre- and post-generalization interview percentages ( $t = 2.81$ ;  $p < .05$ ) the average group mean percentage in each of the four phases of the training program was calculated. Table 2 shows that after the first training session the group mean percentage of eye contact rose from an average of 60.6% to a stable rate of approximately 75%.

### 3.4 Social Validation

Figure 7 presents the results of the two different, experienced personnel officers' "blind" evaluations of each subject's pre- and post-training generalization interview. The evaluations by the two officers

were averaged together for each subject on each of the criteria. As Figure 7 shows, the mean rating of the personnel officers increased on all five subjective scales.

---

Insert Figure 7 about here

---

Based on a 7-point bi-polar scale where 1 = poor and 7 = excellent, the two officers' mean ratings averaged across the five subjects were:

"Applicant's real interest in working"

pre-training generalization interview - 4.3

post-training generalization interview - 5.7

"How 'well-rounded' the applicant's personality is"

pre-training generalization interview - 3.6

post-training generalization interview - 5.6

"Applicant's competence and ability to succeed at the position offered"

pre-training generalization interview - 3.9

post-training generalization interview - 5.8

"Applicant's likelihood of being hired"

pre-training generalization interview - 3.0

post-training generalization interview - 4.9

A t-test for related samples demonstrated a significant difference

( $t = 3.77$ ,  $p < .01$ ) between the personnel officers' mean ratings of the

pre- and post-generalization interviews. One personnel officer's combined

pre- and post-training generalization interview mean rating was 9.0.

The second officer's combined rating was 9.48 which is .075 standard

deviation away from the first officer's rating. This is evidence that

there is no difference on the overall ratings of the candidates between the

two personnel officers; therefore, neither one's scores can solely account

for the significant pre/post difference of the ratings.

These results are consistent with hypothesis 4. Social validation shows that the subjects were rated as low on the subjective scales by two personnel officers prior to training, but as much better candidates for employment following the completion of the training program.

### 3.5 Subjects' Evaluation of Training Program

Every subject filled out and returned the "Job Interview Skills Training Program Evaluation" form. The results of the evaluations are summarized in Table 3. Overall, 88% of the subjects' responses to the enquiries made about the various sections of the program were marked "very" or "somewhat" helpful. None of the participants considered any part of the program to be of no value.

---

Insert Table 3 about here

---

The data indicate that all subjects found the structured interviews to be very helpful. The initial "simulation" or pre-training generalization interview was considered to be somewhat helpful by 40% of subjects while 60% responded that it was of little value. The final "simulation" or post-training generalization interview was rated very helpful by 80% of subjects. On average, the instruction/discussion and brainstorming components of the training sessions were considered either "somewhat helpful" or "very helpful" by all subjects. The skill practice component was rated as "somewhat helpful" by 20% and "very helpful" by 60% of subjects.



#### Chapter 4 - Discussion

The central finding of the present study was that a group training package, providing training solely on three verbal skills, significantly improved the ability of pre-professionals deficient in job interview skills in obtaining a favourable outcome in employment interviews.

The simultaneous replication design made it possible to monitor the impact of the group treatment on the behavior of each subject. All five subjects increased their use of the target behaviors, and the results clearly demonstrated experimental control and generalization of treatment effects to interviews conducted with an unfamiliar personnel officer after the completion of the training.

Perhaps it is not surprising that the participants in this job interview skills training program achieved such a high level of success. The present program was based on a training model developed by other researchers for use with more disadvantaged populations, such as ex-psychiatric patients and retardates (Kelly et al. 1979; Kelly et al. 1980). This study represents an important extension of the research by demonstrating that this type of program can be modified to meet the needs and demands of a different population and setting. It provided excellent results when it was applied to pre-professionals who were of average or above-average intelligence but were in definite need of assistance in order to perform adequately in interviews for co-op engineering work-term positions. The Division of Co-ordination, the department that needed and sponsored the experimental service, required a program that would not only be effective but also be cost and time efficient. One training session devoted to each skill proved to be sufficient to produce improvements that were maintained not only in the structured interviews but in interviews conducted after the conclusion of the program.

Also, training was done in a less costly group setting and it was effective without having to use expensive and often unavailable audiovisual equipment or behavior modeling films.

Perhaps the single most important criterion for assessing the success or failure of a program is the estimation of the subjects as candidates for employment following training. This was done by personnel recruitment officers who regularly recruited co-op program university students for their own firms. Only after training were candidates considered to be suitable for "entrance level" or short-term professional positions. While these were promising results, further research is needed to determine whether this type of training program meets the needs of middle and upper-level professional personnel.

How successful participants are in obtaining jobs has been described as the acid test of a job-interview training program (Krumboltz, Becker, Haven, & Burnett, 1979). The present study demonstrated experimental control of the target behaviors, generalization of treatment effects and social validity of the improvements. More importantly from the point of view of the Division of Co-ordination is that the candidates' performance in the Open Job Competition established that they were in a demonstrably better position to secure a desirable job than they had been in the past.

Although job applicant behavior in the interview is only one of several variables which can influence how successful a job seeker is at securing satisfactory employment, the performance of the experimental subjects in a Co-op Engineering Open Job Competition held approximately one month after the conclusion of the program provides an indication of the relative success of the program for this particular population. On the basis of



their job applicant interviews; three of the participants obtained employment from within the competition and a fourth was selected as the preferred candidate for a position which he was not willing to accept because of its geographical location.

Eighteen months later all five of the candidates had been successful in securing positions in each of two further job competitions in which they had participated subsequent to training.

The popularity or estimated value of a service in the eyes of its target population should also be considered an important criterion for estimating its practical value. The zero percent attrition rate and favourable responses on the consumer evaluation suggests that the program participants considered the training to have met their personal needs and worth their investment of time and effort.

The monitoring of non-target behaviors showed that during training there were changes in the frequency of some concomitant behaviors for most of the subjects. Changes in these non-target behaviors were as follows: eye contact improved after the first training session for three of the five subjects; for one subject, there was a slight decline in his rate of speech disturbances, while for another this rate actually increased; for one subject the only change was a highly variable use of gestures after the first training session; for another subject there was no change on any of the concomitant measures.

For the group as a whole, only eye contact improved significantly and this increase generalized to the post-training interview. Several studies have reported that eye contact improves rapidly when a behavioral

training approach is used (Braukmann et al. 1974; Grinnel and Liberman, 1977; Hollandsworth, Dressel et al. 1977) and it has been suggested that eye contact correlates moderately with various other behaviors, e.g. posture, loudness of voice, volunteering information (Braukmann et al. 1974; Hollandsworth, Kazelskis et al. 1978). It seems plausible that eye contact in the interview is influenced by the amount of self-confidence candidates feel in the interview. The behavioral group training approach specifies concrete or discrete behavior objectives, and through the use of behavioral rehearsal it provides each subject with the opportunity to immediately apply and practice what has been learned. They can also learn from each other by watching each of the other group members in action in a simulated job interview. These conditions maximize the opportunity for individuals to experience a sense of skill mastery which probably appreciably increases their self-confidence in job interviews. The improved eye contact found in this study may reflect this. Future investigation of the relationship between different approaches to interview skill development and changes in self-confidence as a function of and during training is required before a conclusive statement in regard to this matter can be made.

The present study's results support Furman et al.'s (1979) finding that subject gesturing is a behavior that requires specific training in order to be improved. Furthermore, the results suggest that improving the content of a subject's verbalizations, i.e. what he says, will not reliably produce any significant improvement of the candidate's articulative abilities.

The results of this study provides strong support for the recent experimental programs that emphasize the development of candidates' verbal skills. Most interview training programs must operate within definite time



constraints. It is not possible to provide training on all aspects of human behavior that may be relevant in the job interview nor does it appear to be necessary in order to successfully assist clients in achieving their objective.

Social validation of the changes that occurred as a consequence of training indicated that the improvements made were considered to be of real importance to personnel officers. The use of videotape recordings for the social validation procedure enabled the judges or personnel officers to monitor actual interviews. This provided the judges with the opportunity to be influenced by nonverbal and social cultural variables which earlier research identified as being partially responsible for influencing the interviewer's evaluation of a candidate. The social validation results of the present study are consistent with those of Kelly et al. (1979) and Kelly et al. (1980) even though these earlier studies used only audiotapes in their social validation procedures. It has already been pointed out that there were some changes in the concomitant behaviors for individual subjects. It is important to note that only the verbal skills improved for all five of the training program participants. It appears that it is this improvement in verbal skills that is primarily responsible for the improved evaluations they all received following training. This provides further support for Hollandsworth, Kazelskis, Stevens and Dressel's (1979) conclusion that verbal content is the most influential candidate variable. However, further research is still required to determine the relative contribution specific verbal skills make to the interviewer's overall evaluation of the candidate.

It is important to note that while the effects of brief content oriented training can be dramatic, trainers should not rely upon the verbal training to produce improvements in nonverbal or articulative



behavior, therefore, if a client displays specific nontargeted behavior that is obviously seriously jeopardizing his or her chances of obtaining a positive outcome in a job interview, then supplementary intervention for the individual in need is advisable.

One pressing need at the present time is an investigation of the exportability and replicability of this training package. An experimental investigation is required to determine if an instructional package, consisting of training materials for the participants and thorough instructions for the trainer on the procedures to follow in the training, can be used effectively by the regular Co-ordination Division counselling staff.

Further empirical work to determine what skills are critical for successful performance in the job interview would be desirable. This should include an investigation of variability of skills required or valued across type and level of occupation, sex of interviewee, sex of interviewer, and types of interview.

For the more general perspective of career or vocational counselling, it would be helpful to know what effects an improvement of interview skills may have on the relative satisfaction candidates express for whatever position they subsequently secure. Similarly, do improved interview skills increase the likelihood that candidates will keep their jobs for a longer period of time?

To date, behavioral job interview skill training has proven to be a promising area of development and research for professional and applied psychology; however, further empirical investigation of theoretically and clinically important issues is needed. Sponsorship of these activities should be considered a responsibility and priority by service agencies involved in offering employment assistance to both normal and disadvantaged populations.

## Reference Notes

1. University and College Placement Association.  
The Interview. Toronto.
2. New York Life Insurance Company. Making the Most of Your Job Interview. New York.
3. Canada Employment Centre on Campus: Vancouver Community College, Langara Campus. Making the Most of Your Interview. Vancouver, B.C.
4. Sandifer, B.A., & Hollandsworth Jr., J.G. Job Interview Skills Training: A Workshop Model. Jackson: Mississippi State Department of Education, Division of Vocational-technical Education, 1978.
5. Memorial University of Newfoundland Calendar 1980-81. St. John's, Nfld.: Memorial University of Newfoundland, 1980.
6. Division of Co-ordination, Memorial University of Newfoundland. Information for Students in the Co-op Programme: The Job Competition. St. John's, Nfld.

## References

- Azrin, N.H., Flores, T. & Kaplan, S.J. Job finding club: A group assisted program for obtaining employment. Behavior Research and Therapy, 1975, 13, 17-27.
- Babcock, R.J. & Yeager, J.C. Coaching for the job interview. Journal of College Placement, 1973, 33(3), 61-64.
- Baer, D.M., Wolf, M.M., & Risley, T.R. Some current dimensions of applied behavior analysis. Journal of Applied Behavior Analysis, 1968, 1, 91-97.
- Bardee, J.R., & Keil, E.C. Experimental techniques of job interview training for the disadvantaged: videotape feedback, behavior modification and microcounseling. Journal of Applied Psychology, 1973 58, 209-213.
- Braukmann, C.J., Fixsen, D.L., Phillips, E.L., Montrose, M.W. & Maloney, D.M. An analysis of a selection interview training package for predelinquents at Achievement Place. Criminal Justice and Behavior, 1974, 1, 30-42.
- Catalyst Staff. Marketing Yourself: The Catalyst Woman's Guide to Successful Resumes and Interviews. New York: G.P. Putnam's Sons, 1980.
- Clowers, M.R. & Fraser, R.T. Employment interview literature: A perspective for the counselor. Vocational Guidance Quarterly, 1977, 19, 13-26.
- Drake, L.R., Kaplan, H.R., & Stone, R.A. how do employers value the interview? Journal of College Placement, 1972, 32, 47-51.
- Furman, W., Geller, M., Simon, S.J. & Kelly, J.A. The use of a behavior rehearsal procedure for teaching job-interviewing skills to psychiatric patients. Behavior Therapy, 1979, 10, 157-167.
- Hall, C., Sheldon-Wildgen, J., & Sherman, J.A. Teaching job interview skills to retarded clients. Journal of Applied Behavior Analysis, 1980, 13, 433-442.
- Hall, S.M., Loeb, P., Coyne, K. & Cooper, J. Increasing employment in ex-heroin addicts I: Criminal justice sample. Behavior Therapy, 1981, 12, 443-452.
- Hall, S.M., Loeb, P., LeVois, M., & Cooper, J. Increasing employment in ex-heroin addicts II: Methadone maintenance sample. Behavior Therapy, 1981, 12, 453-460.
- Hartmann, D.P. Considerations in the choice of interobserver reliability estimates. Journal of Applied Behavior Analysis, 1977, 10, 103-116.



- Hollandsworth Jr., J.G., Dressel, M.E., & Stevens, J. Use of behavioral versus traditional procedures for increasing job interview skills. Journal of Counseling Psychology, 1977, 24, 503-510.
- Hollandsworth, Jr., J.G., Glazeski, R.C., & Dressel, M.E. Use of social skills training in the treatment of extreme anxiety and deficient verbal skills in the job interview setting. Journal of Applied Behavior Analysis, 1978, 11, 259-269.
- Hollandsworth Jr., J.G., Kazelskis, R., Stevens, J., & Dressel, M.E. Relative contributions of verbal, articulative, and nonverbal communication to employment decisions in the job interview setting. Personnel Psychology, 1979, 32, 359-367.
- Hollandsworth Jr., J.G., & Sandifer, B.A. Behavioral training for increasing effective job interview skills: Follow-up and evaluation. Journal of Counseling Psychology, 1979, 26, 448-450.
- Imada, A.S., & Hakel, M.D. Influence of nonverbal communication and rater proximity on impressions in simulated employment interviews. Journal of Applied Psychology, 1977, 62, 295-300.
- Ireh, R.K. Go Hire Yourself an Employer. Garden City, New York: Anchor Press/Doubleday, 1978.
- Kelly, J.A. The simultaneous replication design: The use of a multiple baseline to establish experimental control in single group social skills treatment studies. Journal of Behavior Therapy and Experimental Psychiatry, 1980, 11, 203-207.
- Kelly, J.A., Laughlin, C., Claiborne, M., & Patterson, J. A group procedure for teaching job interviewing skills to formerly hospitalized psychiatric patients. Behavior Therapy, 1979, 10, 299-310.
- Kelly, J.A., Wildman, B.G., & Berler, E.S. Small group behavioral training to improve the job interview skills repertoire of mildly retarded adolescents. Journal of Applied Behavior Analysis, 1980, 13, 461-471.
- Kelly, M.B. A review of the observational data-collection procedures reported in the Journal of Applied Behavior Analysis. Journal of Applied Behavior Analysis, 1977, 10, 97-101.
- Kiradjieff, E.J., & Stimac, M. Videotaping. Journal of College Placement, 1975, 35(4), 67-68.
- Krumboltz, J.D., Becker-Haven, J.F., & Burnett, K.F. Counseling psychology. Annual Review of Psychology, 1979, 30, 555-602.
- Lalonde, G. Four Minutes to the Job You Want. Toronto: McGraw-Hill Ryerson, 1980.
- Libet, J.M. & Lewinsohn, P.M. Concept of social skill with special reference to the behavior of depressed persons. Journal of Consulting and Clinical Psychology, 1973, 2, 304-312.

- Mahl, G.F. Disturbances and silences in the patient's speech in psychotherapy. Journal of Abnormal and Social Psychology, 1956, 53, 1-15.
- Mathews, R.M., Whang, P.L., & Fawcett, S.B. Development and validation of an occupational skills assessment instrument. Behavioral Assessment, 1980, 2, 21-85.
- Minkin, N., Braukmann, C.J., Minkin, B.L., Timbers, G.T., Timbers, B.J., Fixen, D.L., Phillips, E.L., & Wolf, M.M. Journal of Applied Behavior Analysis, 1976, 9, 127-139.
- McGovern, T., & Ideus, H. The impact of nonverbal behavior in the employment interview. Journal of College Placement, Spring 1978, 51-53.
- Pate, Jr., R.H., & Harwood, R.K. Employment interviews: How critical? Journal of Employment Counseling, 1974, 11, 176-182.
- Prazak, J.A. Learning job-seeking interview skills. In J.D. Krumholtz & C.E. Thoreson (Eds.), Behavioral Counseling: Cases and techniques. New York: Holt, 1969.
- Raanan, S.J., & Lynch, T.H. Two approaches to job-hunting workshop: 'Job Scene'. Journal of College Placement, 1974, 34(2), 67-74.
- Repp, A.C., Deitz, E.D. Boles, S.M. Deitz, S.M. & Repp, C.F. Differences among common methods for calculating inter-observer agreement. Journal of Applied Behavior Analysis, 1976, 9, 109-113.
- Robertson, J. How to Win in a Job Interview. Englewood Cliffs, New Jersey: Prentice-Hall, 1978.
- Schlossmen, A.G. Job marketability training and placement success. Journal of College Placement, Spring 1979, 39-42.
- Schmitt, N. Social and situational determinants of interview decisions: Implications for the employment interview. Personnel Psychology, 1976, 29, 79-101.
- Spence, S.H. Validation of social skills of adolescent males in an interview conversation with a previously unknown adult. Journal of Applied Behavior Analysis, 1981, 14, 159-168.
- Sulzer-Azaroff, B. & Mayer, G.R. Applying Behavior Analysis Procedures with Children and Youth. New York: Holt, Rinehart and Winston, 1977.
- Tschirgi, H.D. What do recruiters really look for in candidates? Journal of College Placement, 1973, 33(3), 75-79.

Twentyman, C.T., & Zimering, R.T. Behavioral training of social skills: A critical review. Progress in Behavior Modification, 1979, 7, 319-400.

Vernardos, M.G., & Harris, M.B. Job interview training with rehabilitation clients: A comparison of videotape and role-playing procedures. Journal of Applied Psychology, 1973, 58, 365-367.

Walker, H.M., Hops, H., & Johnson, S.M. Generalization and maintenance of classroom treatment effects. Behavior Therapy, 1975, 6, 188-200.



Appendix I

## EXPLANATION OF THE RATING AND MATCHING PROCESS

## I. RATING

## a) Employer

After interviews, please indicate one of the following three categories

P = Preferred, A = Acceptable, NR = Not Rated

There is no limit to the number of students rated in each category. The more students rated P, the greater the chances of obtaining a student\*

## b) Student

After interviews, please rank employers in order of preference. Do not rate any job in which you are not interested. Students will not be placed in jobs they rate NR (not rated).

## II. MATCHING

Employer ratings are given a weight of P = 1, A =  $4\frac{1}{2}$ .

Student ratings are given a weight numerically equal to the order of preference.

\*Ties can occur under this system, eg. - if two or more students rated "P" by an employer rank that employer as their first choice. To avoid ties, employers may list students in order of preference (eg, P1, P2, P3, A1, A2, A3). If no order of preference is given, ties will be broken randomly.

## EXAMPLE

Students	Employer's Weight	Student's Weight	Total
Rose	P = 1	1	2
Kelly	P = 1	2	3
Power	P = 1	NR	0
Noseworthy	A = $4\frac{1}{2}$	1	$5\frac{1}{2}$
Butler	A = $4\frac{1}{2}$	4	$8\frac{1}{2}$
Andrew	NR = 0	1	0

(Note 6, undated, p. 11)

Appendix II



JOB INTERVIEW SKILLS:STRUCTURED INTERVIEW INSTRUCTIONS AND QUESTIONS

Ask the subject the ten questions listed below one at a time and in the same order as they are presented here. For each question, following a reply, summarize or acknowledge the subject's response in one sentence. After an eight (8) second silence, ask the next question from the script.

QUESTIONS:

1. Tell me a little about yourself.
2. Why did you decide to do engineering in university?
3. What do you know about our company?
4. What interests you in particular about this position?
5. What are your major strengths?
6. What are your major weaknesses?
7. Do you have any personal problems that might interfere with your ability to perform this job?
8. What do you expect to be doing in five (5) years?
9. Why should I hire you for this position instead of someone else?
10. Do you have any questions you'd like to ask me?

Appendix III

# Job Interview Performance Rating Form

You will be shown a series of videotape recordings of candidates being interviewed for Engineering work term positions (total number of interviews = 10). Please rate the person shown on the videotape on a seven point scale, where 1 = poor and 7 = excellent, for each of the areas specified. Each person will be presented twice. Please complete your evaluation of the candidate's performance in the interview you will now view before proceeding to the next videotaped interview.

Interview # \_\_\_\_\_

Your Name \_\_\_\_\_

A. Applicant's previous experience and education.

poor 1 - 2 - 3 - 4 - 5 - 6 - 7 excellent

B. Applicant's real interest in working.

poor 1 - 2 - 3 - 4 - 5 - 6 - 7 excellent

C. How "well rounded" the applicant's personality is.

poor 1 - 2 - 3 - 4 - 5 - 6 - 7 excellent

D. Applicant's competence and ability to succeed at the position offered.

poor 1 - 2 - 3 - 4 - 5 - 6 - 7 excellent

E. Applicant's likelihood of being hired.

poor 1 - 2 - 3 - 4 - 5 - 6 - 7 excellent

Notes &/or Comments:



Appendix IV

# JOB INTERVIEW SKILLS TRAINING PROGRAM EVALUATION

Name \_\_\_\_\_

1. How valuable were the following?

- a. Initial "simulated" interview
- b. Structured practice interviews

**Training Session I - Asking questions:**

- c. Instruction/discussion of importance of skill
- d. "Brainstorming": Possible questions to ask
- e. Skill Practice: In-group role-played interview

Training Session II - Verbal expression of enthusiasm and interest:

- f. Instruction/discussion of importance of skill
- g. "Brainstorming": Expressing enthusiasm and interest
- h. Skill Practice: In-group role-played interview

Training Session III - Expressing positive information  
about education and experience

- 1. Instruction/discussion of importance of skill
- j. "Brainstorming": Employment and educational experiences, skills, and knowledge that are job relevant
- k. Skill Practice: In-group role-played interview
- 1. Final "simulated" interview

**Very Helpful**

## Somewhat Helpful

OF Little  
Value

OF No  
Value

Did not  
Do

JOB INTERVIEW SKILLS TRAINING PROGRAM EVALUATION

Name \_\_\_\_\_

2. What were the best parts of the program?  
\_\_\_\_\_

3. What parts of the program could be improved?

4. How would you describe the overall experience?



Tables

Table 1

Group mean performance of subjects in Pre- and Post-training generalization interviews

Target Behaviors	Pre-training Performance			Post-training Performance			t Value
	Grp. $\bar{X}$	SD	Grp. Range	Grp. $\bar{X}$	SD	Grp. Range	
No. job relevant questions to interviewer	3.2	3.1	1-9	7.6	4.9	3-17	4.28**
No. expressions of enthusiasm and interest	2.8	2.0	0-5	7.0	4.2	1-14	2.81*
No. statements conveying positive information about education and experience	1.0	0.6	0-2	9.0	2.9	5-12	4.00**
<u>Concomitant Behaviors</u>							
No. gestures	2.8	5.6	0-14	6.0	8.4	0-22	1.75
Percentage of eye contact	54.2	20.4	25-71	79.2	11.7	64-99	2.81*
Speech Disturbances/min.	13.8	3.5	10-20	15.0	6.4	5-25	0.38

\*\*p&lt;.01

\*p&lt;.025

Table 2

Group mean performance of subjects in structured interviews

## A. Target Behaviors

	<u>Average Performance Before Training on Target Behavior</u>			<u>Average Performance After Training on Target Behavior</u>		
	<u>Grp. <math>\bar{X}</math></u>	<u>SD</u>	<u>Grp. Range</u>	<u>Grp. <math>\bar{X}</math></u>	<u>SD</u>	<u>Grp. Range</u>
No. job relevant questions to interviewer	3.4	.86	2.2-4.2	8.8	.94	8.2-10.6
No. expressions of enthusiasm and interest	3.9	.32	3.4-4.4	11.9	2.7	8.6-16.4
No. statements conveying positive information about education and experience	1.9	.68	1.0-3.2	7.4	2.7	4.8-10.2

## B. Concomitant Behaviour

Phase of Training Program

	<u>Baseline</u>			<u>After Training on Questions to Interviewer</u>			<u>After training on Enthusiasm and Interest</u>			<u>After training on Positive Information</u>		
	<u>Grp. <math>\bar{X}</math></u>	<u>SD</u>	<u>Grp. Range</u>	<u>Grp. <math>\bar{X}</math></u>	<u>SD</u>	<u>Grp. Range</u>	<u>Grp. <math>\bar{X}</math></u>	<u>SD</u>	<u>Grp. Range</u>	<u>Grp. <math>\bar{X}</math></u>	<u>SD</u>	<u>Grp. Range</u>
% of eye contact	60.6	7.8	49.8-68.3	75.3	5.6	68.8-79.0	73.3	5.6	69.8-76.2	74.4	2.0	72.6-76.6



Table 3

## Results of job interview skills training program evaluation

How valuable are the following?

a. initial "simulated" interview	0%	40%	60%	0%
b. structured practice interviews	100%	0%	0%	0%

Training Session I - Asking questions:

c. Instruction / discussion of importance of skill	40%	60%	0%	0%
d. "Brainstorming": possible questions to ask	80%	20%	0%	0%
e. Skill Practice: In-group role played interview	80%	0%	20%	0%

Training Session II - Verbal expression of enthusiasm and interest

f. Instruction / discussion of importance of skill	20%	80%	0%	0%
g. "Brainstorming": expressing enthusiasm and interest	40%	60%	0%	0%
h. Skill Practice: In-group role-played interview	40%	40%	20%	0%

Training Session III - Expressing positive information about education and experience

i. Instruction / discussion of importance of skill	80%	20%	0%	0%
j. "Brainstorming": employment and education experiences, skills and knowledge that are job relevant	60%	40%	0%	0%
k. Skill Practice: In-group role played interview	60%	20%	20%	0%
l. Final "simulated" interview	80%	0%	20%	0%

Note: All values are expressed in percentages

N=5

Very  
HelpfulSomewhat  
HelpfulOf Little  
Value

Of No Value

Figures

# FREQUENCY OF BEHAVIORS IN STRUCTURED JOB INTERVIEWS

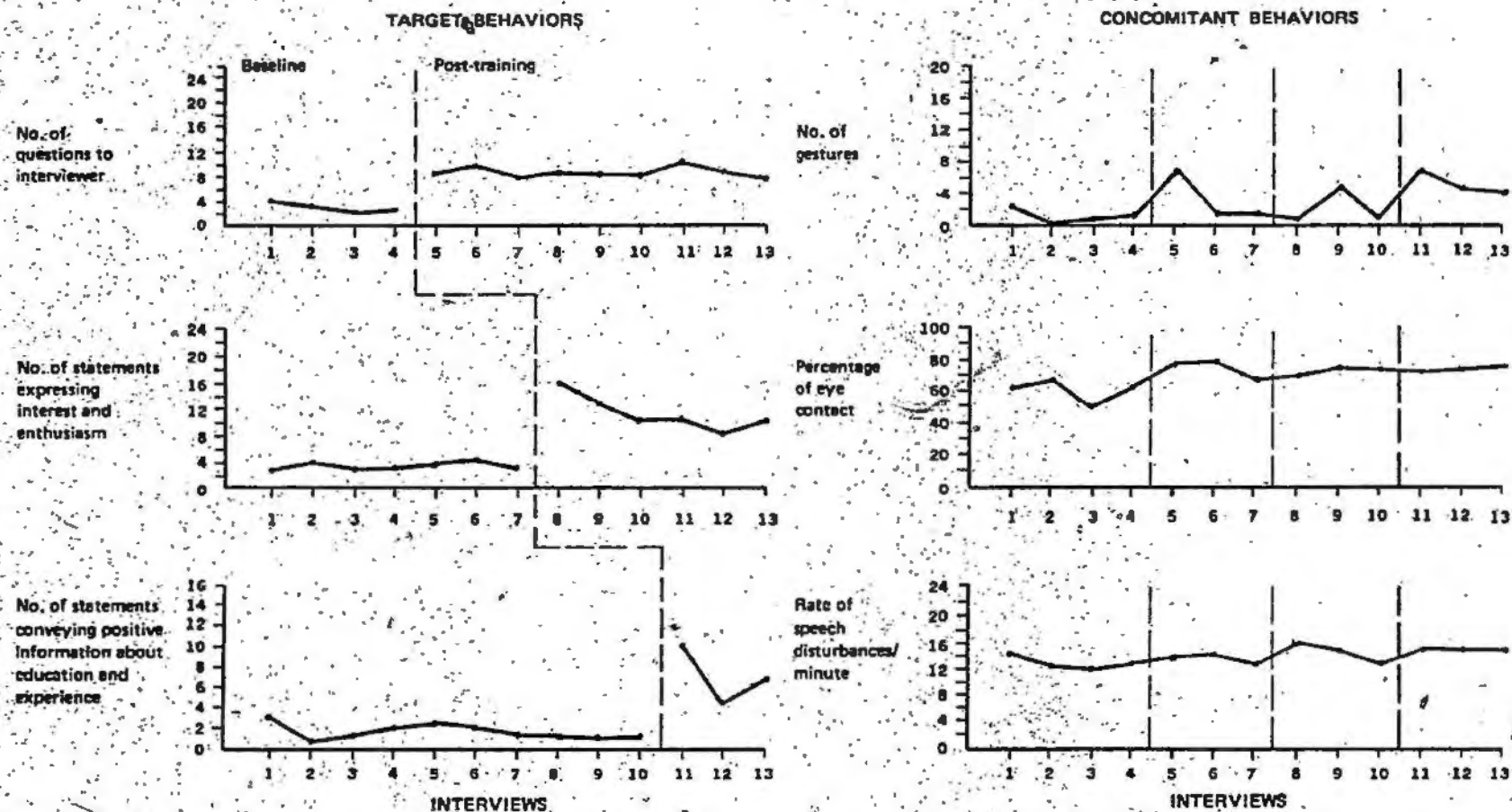


Figure 1. Job interview skills training program: Group mean frequency of target and concomitant behaviors in structured job interviews.



## FREQUENCY OF BEHAVIORS IN STRUCTURED JOB INTERVIEWS

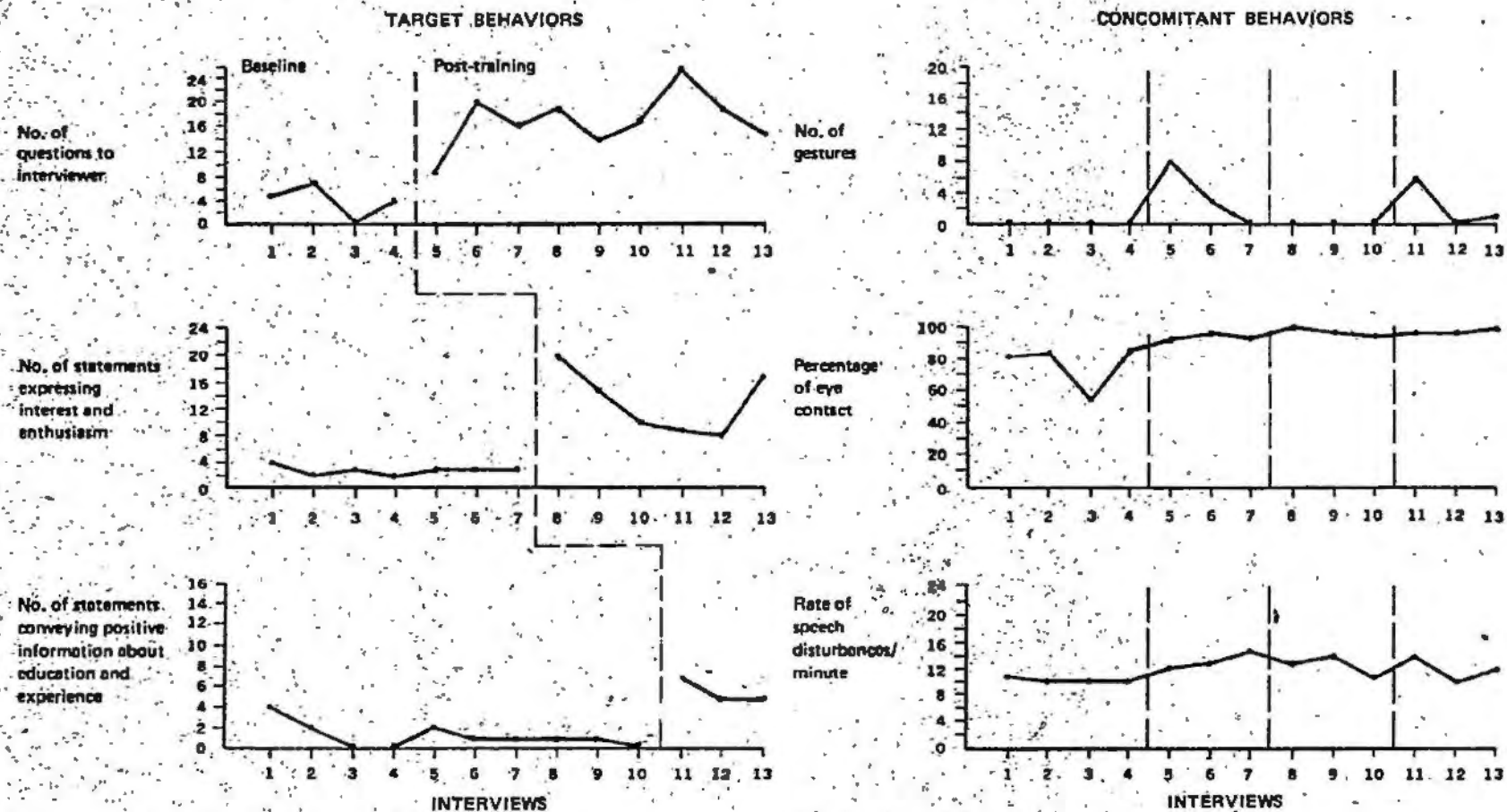


Figure 2: Subject A: Frequency of target and concomitant behaviors in structured job interviews.

# FREQUENCY OF BEHAVIORS IN STRUCTURED JOB INTERVIEWS

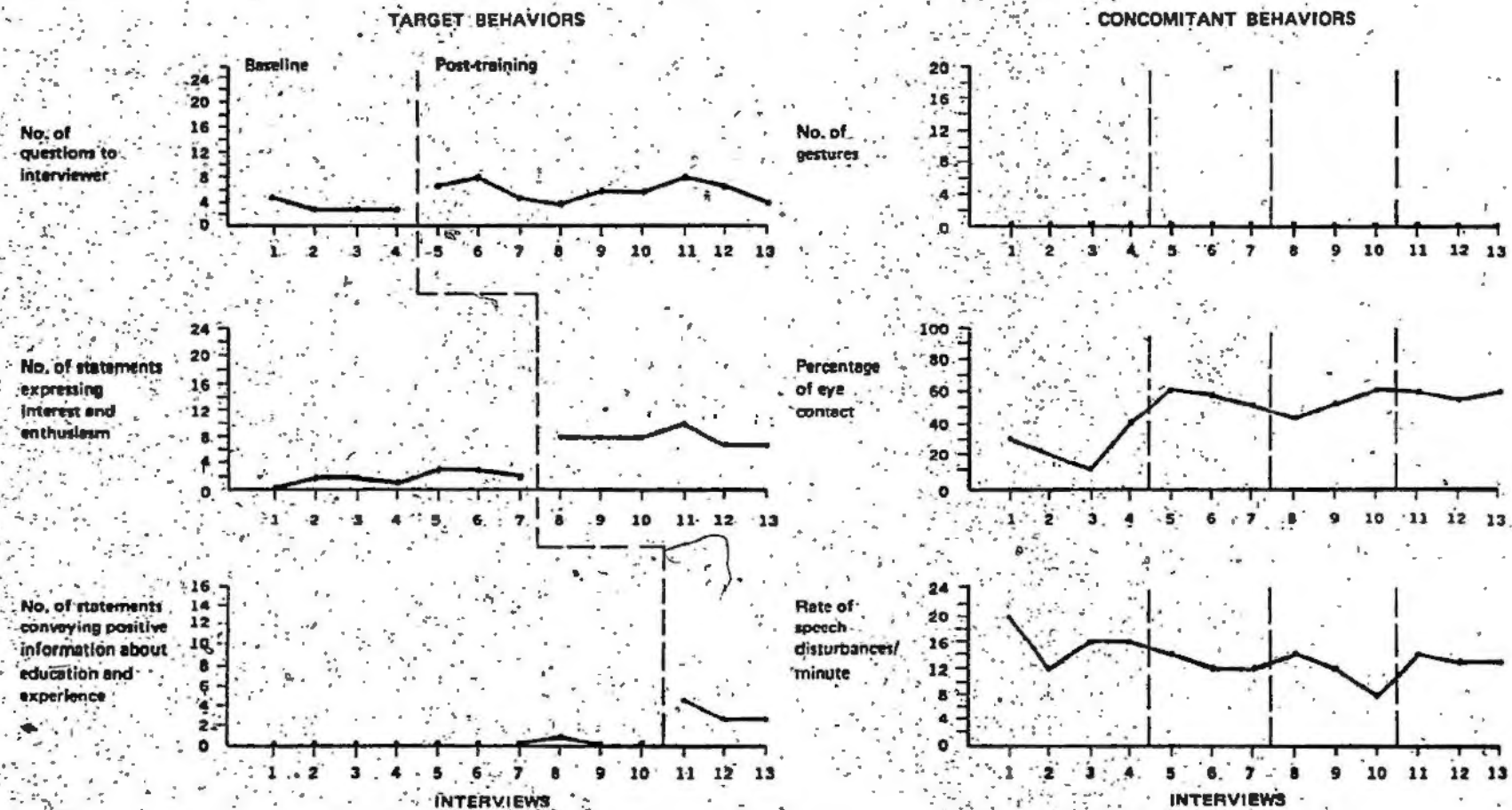


Figure 3. Subject B: Frequency of target and concomitant behaviors in structured job interviews.

# FREQUENCY OF BEHAVIORS IN STRUCTURED JOB INTERVIEWS

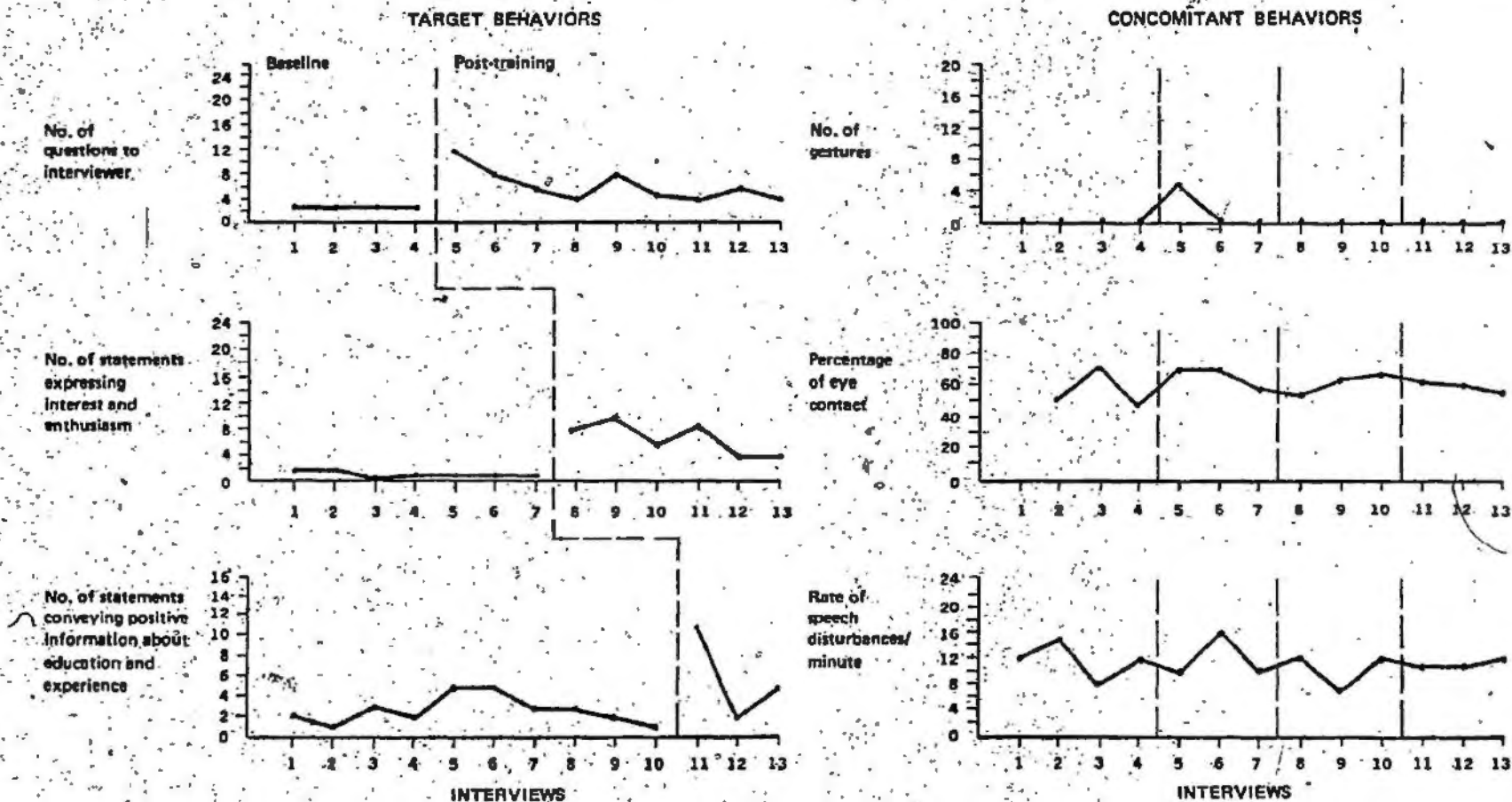


Figure 4. Subject C: Frequency of target and concomitant behaviors in structured job interviews.



# FREQUENCY OF BEHAVIORS IN STRUCTURED JOB INTERVIEWS

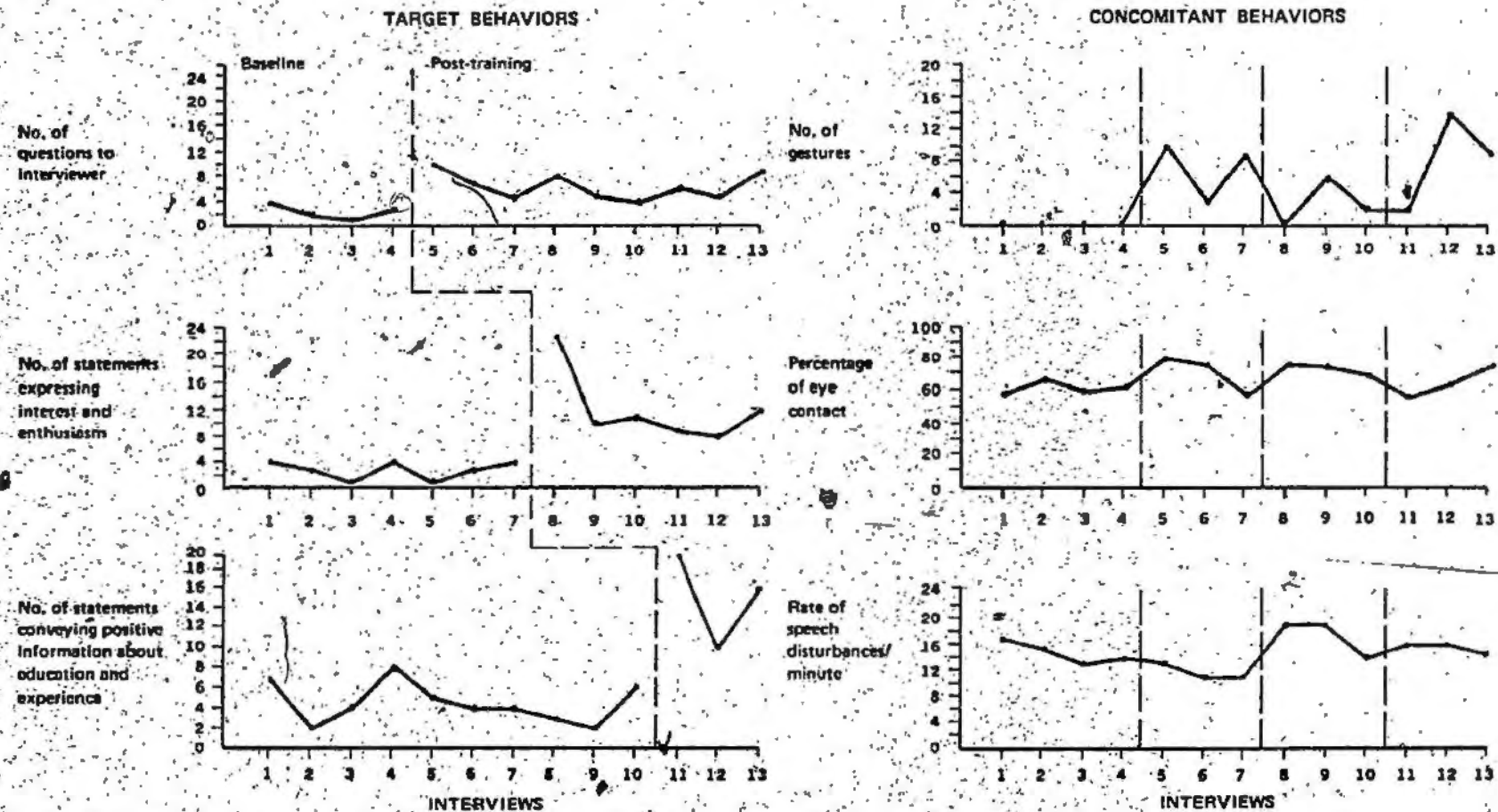


Figure 5. Subject D: Frequency of target and concomitant behaviors in structured job interviews.

# FREQUENCY OF BEHAVIORS IN STRUCTURED JOB INTERVIEWS

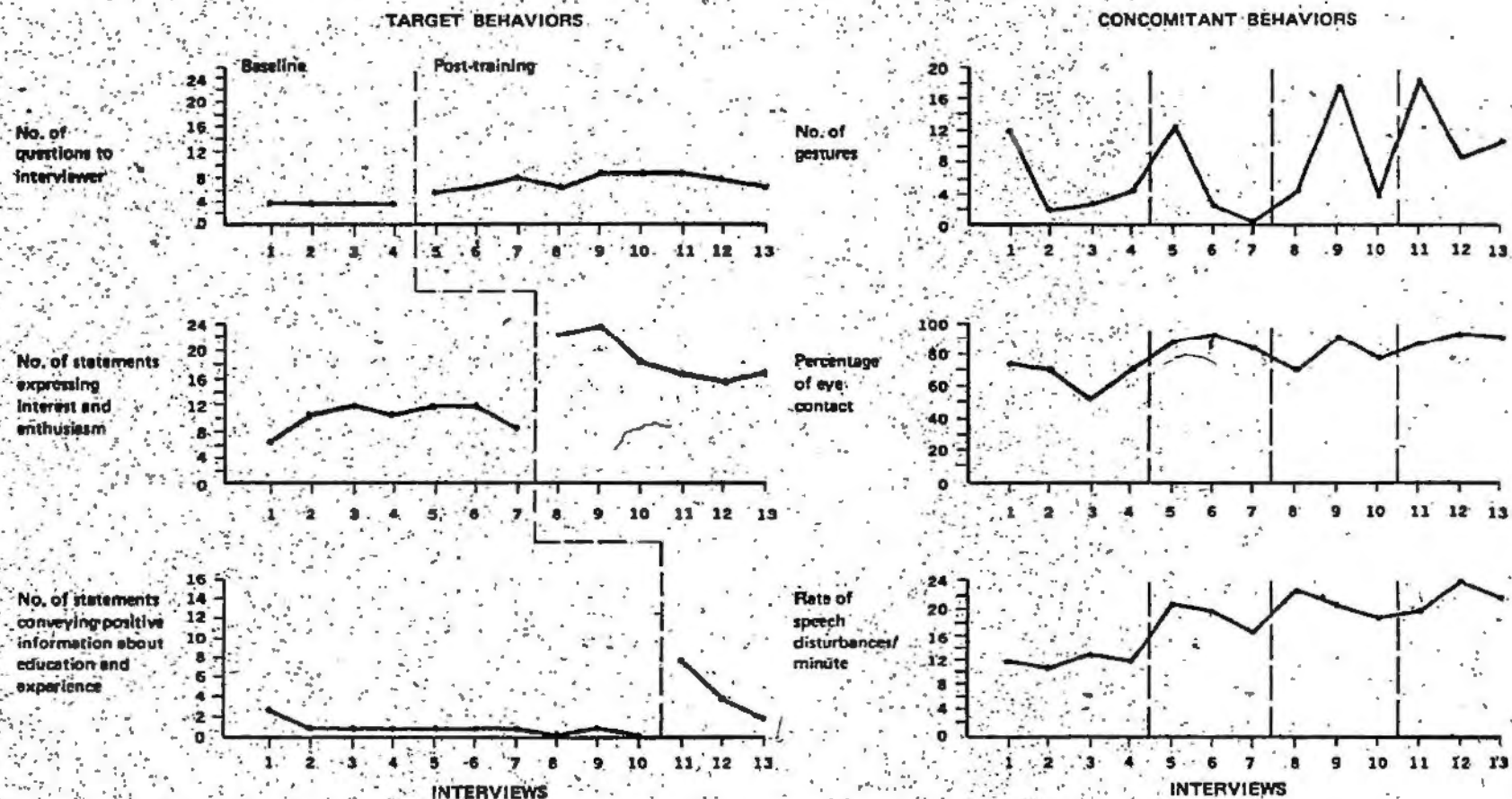


Figure 6. Subject E: Frequency of target and concomitant behaviors in structured job interviews.

# EXPERIENCED PERSONNEL OFFICERS' "BLIND" EVALUATIONS OF SUBJECT PRE- AND POST-TRAINING GENERALIZATION INTERVIEWS

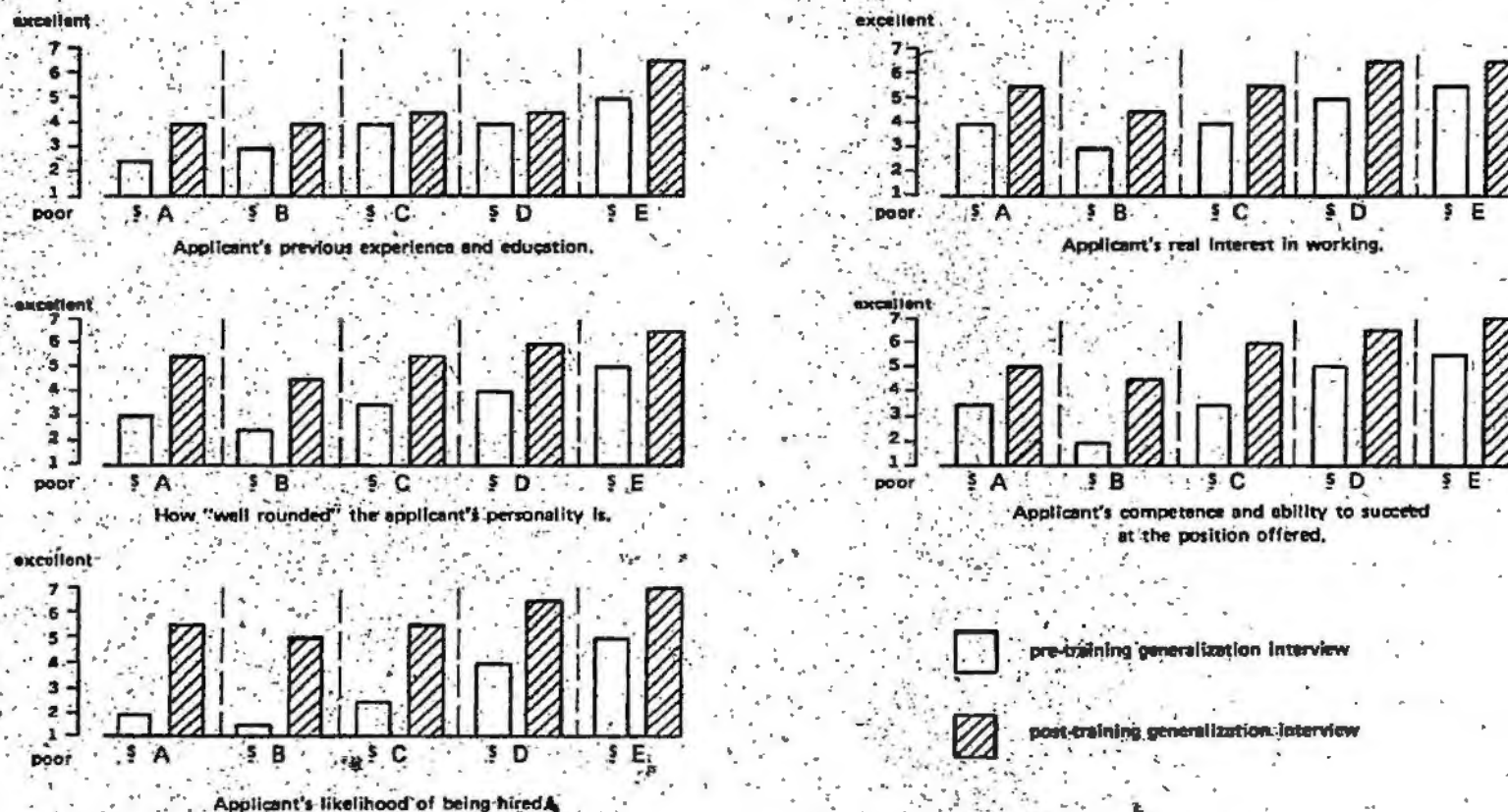


Figure 7. Experienced personnel officers' "blind" evaluations of subject pre- and post-training generalization interviews on five global, qualitative scales. The evaluations of two officers were averaged together for each subject on each of the five criteria.







