TO DETERMINE THE EXTENT OF USE OF INTERACTION ANALYSIS, MORE THAN 400 QUESTIONNAIRES WERE SENT TO PROFESSIONAL EDUCATORS. OF 186 RETURNS (46 PERCENT), 85 WERE UNANSWERED BECAUSE OF UNFAMILIARITY WITH THE METHOD. OF THE REMAINING 101, 69 COLLEGE TEACHERS, PRINCIPALS, SUPERVISORS, AND ELEMENTARY AND SECONDARY TEACHERS STATED THAT THEY HAD HAD LIMITED EXPERIENCE WITH IT, 18 COLLEGE FACULTY MEMBERS SAID THEY WERE USING THE TECHNIQUE IN PROGRAMS WITH STUDENT TEACHERS, EIGHT RESPONDENTS WERE USING IT TO DO RESEARCH ON TEACHING, AND SIX WERE USING IT BOTH FOR TRAINING STUDENT TEACHERS AND FOR RESEARCH ON TEACHING BEHAVIOR. RESPONDENTS CITED STRENGTHS AND WEAKNESSES OF THE SYSTEM WITH REGARD TO THE TRAINING OF OBSERVERS, THE ADEQUACY OF THE CATEGORIES USED, AND THE REACTIONS OF THOSE LEARNING THE SYSTEM. MAJOR WEAKNESSES WERE FELT TO BE THE USE OF A NUMBER TO REPRESENT A TEACHING BEHAVIOR, AND THE (TO SOME) THREATENING PROSPECT OF HAVING TO ANALYZE ONE'S OWN TEACHING BEHAVIOR. MAJOR STRENGTHS WERE ADDITIONS AND THE OPERATIONALIZING OF METHODS AND THEORY. SOME OF THE AUTHORS' EXPERIENCES AT TEMPLE UNIVERSITY ARE PRESENTED WITH EMPHASIS ON STUDENTS' MORE FAVORABLE REACTION TO INTERACTION ANALYSIS THAN TO A LEARNING THEORY COURSE. GUIDELINES FOR USING INTERACTION ANALYSIS ARE PRESENTED, AND SOME OF THE SCHOOLS USING THE TECHNIQUE ARE NAMED. THIS PAPER WAS PRESENTED TO THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, CHICAGO, FEBRUARY 1965. (LC)
"Implications for Teacher Education of Interaction Analysis Research in Student Teaching" *

by

Edmund Amidon
and
Anita Simon
Temple University

In an attempt to determine the extent to which Interaction Analysis has been used in teacher education, the Group Dynamics Center, Temple University, has sent out over four hundred questionnaires during the past year. The questionnaires were sent to professional educators who might be expected to have some knowledge of Interaction Analysis.

Approximately 186 questionnaires were returned. Of those, 85 had not heard of Interaction Analysis or were not familiar enough with the system to answer the questions.

*This paper was part of a symposium on Interaction Analysis and its application to student teaching that was presented at the American Educational Research Association, February 1965, in Chicago, Illinois.
One hundred and one of the questionnaires were returned with some additional information on them. The largest group, sixty nine college teachers, principals, supervisors, and elementary and secondary teachers, stated that they had had limited experience with the technique. In this group were 20 principals who reported that they had tried teaching Interaction Analysis to their teachers. The second largest group of respondents consisted of eighteen college faculty members who said that they were using Interaction Analysis in systematic programs with interns or student teachers. These 18 college people indicated that they were training their students to be able to use the categories and the matrix with some facility.

Eight respondents indicated that they were using Interaction Analysis to do research on teaching or student teaching and six respondents said that they were using Interaction Analysis for training student teachers or Interns and also as a research tool to measure teaching behavior.

Interaction Analysis is being or has been used in teacher education programs at Glassboro State College, N.J., University of Wisconsin, Milwaukee, Ohio State University, University of Illinois, Syracuse University, Temple University, and several universities and colleges in Oregon. Interaction Analysis has also been used at several other institutions in graduate and undergraduate courses and on a limited scale in intern and student teaching programs. The institutions just mentioned represent at best a partial list. The Group Dynamics Center at Temple University is continuing to collect information about the extent to which Interaction Analysis is used in teacher
education and we would be interested in obtaining the addresses of any people who are using Interaction Analysis in supervision, teaching, and/or research.

It seems that the impact of Interaction Analysis on graduate and undergraduate students, college professors, and public school teachers has begun to be felt. Still the results of the survey just described indicate that those educators who have had experience with Interaction Analysis feel that it has a number of limitations as well as strengths. A summary of the strengths and limitations mentioned by the questionnaire respondents follows.

Limitations

The limitations appear to fall into three major classifications: (1) those which are concerned with the training of observers (2) those concerned with the nature of the categories and the matrix, and (3) those which are related to reactions which teachers, student teachers and interns have to the system.

A few who responded to the questionnaire said that Interaction Analysis was difficult for them to learn. They felt that the categories were sufficiently unclear so that observers had difficulty in establishing reliability among themselves, and that the training of observers was too long a process.

On the other hand, about four people felt that the system was too simple, and that although it was easy to use, it was not sophisticated enough or conceptually complex enough to provide the information necessary for a useful analysis of teaching.

The second major group of limitations is concerned with
the categories themselves. One criticism expressed by about ten respondents was that there were not enough pupil categories. For example, there are no categories for recording pupil to pupil interaction, there is no way to describe two simultaneously occurring behaviors, and there are no categories to describe pupil non-verbal behavior.

Another limitation mentioned by four respondents was that the categories of Interaction Analysis do not provide information which is relevant to the most important aspects of teaching behavior. Two respondents, for example, felt that Interaction Analysis should identify good and bad patterns of teaching. Two felt that Interaction Analysis should include categories which enable the observer to classify the content of a lesson. One person felt that Interaction Analysis should provide a procedure for classifying the level of thinking of teachers and children.

The educators responding to the questionnaire listed very few comments which indicated negative student reactions, the third major classifications of limitations. If they had, this would be perhaps the most important criticism when one considers using Interaction Analysis with student teachers. The two limitations most often mentioned by those replying to the questionnaire were that those learning Interaction Analysis did not like the idea that a number could represent a teaching behavior, and that some teachers, interns, and student teachers were threatened by the prospect of having to analyze their own teaching behavior. This threat can result in behavior which is defensive, negative, indifferent or rationalizing. Since
fewer than 50% of the questionnaires sent out were returned, it is possible that the questionnaires received represent a biased sample; that is, those people who were most critical of Interaction Analysis or who met with resistance in teaching it, may have not responded. It seems more reasonable, however, to assume that most of the educators who did not return the questionnaire were people who had not heard of Interaction Analysis.

**Strengths**

The strengths of the system of Interaction Analysis mentioned by those people responding to the questionnaire, are either related to the nature of the system or to the reactions of those learning the system.

Over 90% of the people who returned a completed questionnaire seemed to think that Interaction Analysis was a significant tool which could be used to provide objective feedback to student teachers, interns, or teachers in service. Most respondents also seemed to believe that the system was simple yet comprehensive enough to include the most important elements in the teaching act.

The most positive statements made by those surveyed were concerned with the reactions of those who learned Interaction Analysis. Student teachers feel that Interaction Analysis is significant because it helps make operational much of what they have already learned about educational methods and theory. Students also appear to think that they have gained insight into their teaching behavior and that this insight will make it possible for them to adjust their behavior to various types
Some Experiences at Temple

The department of Secondary Education at Temple University has been teaching Interaction Analysis to students for two years. This has been done as part of an experiment in which student teachers have learned either Interaction Analysis or taken the conventional course in learning and educational psychology. During this same period some of the supervisors of student teachers in the department of elementary education at Temple have also taught Interaction Analysis to student teachers.

One of the most interesting and significant things about the course in Interaction Analysis has been the reactions of the students in the department of Secondary Education. At the end of the semester evaluation forms in the learning theory sections and the Interaction Analysis sections were filled out anonymously by the students. In addition, because of the informal climate created by the staff members teaching both courses, the students are constantly communicating their reactions about the course to the instructors.

In general, in the beginning and through the middle of the semester many of the students in the Interaction Analysis course were very negative and resistant toward the course content. The staff has found that the best approach to working with the negative reactions of the students is to accept the feelings and opinions of the students. By the end of the semester things change. As a group, the students are extremely enthusiastic about Interaction Analysis. Many feel that the
course is the best that they have ever had. Many feel that they have gained valuable insight into their teaching and that this insight will carry over after they have become teachers. The staff members' evaluations of the students in student teaching and in role-playing situations often confirm the perceptions of the students about the effects that Interaction Analysis has had on them.

Some typical student reactions at the end of the Interaction Analysis course are:

"Flanders worthwhile adventure - perhaps the most significant thing that I have learned in definitely any Ed. course and in most academic courses."

"This is one course in Education I feel was quite worthwhile - lab was best. It would be even greater if the lecture was given with the lab class (small and informal - able to stimulate more questions from students like me who tend to clam up in large groups)."

"I found the course beneficial because its application to life is endless. I almost feel that interaction analysis gives me an edge on the rest of the human race."

"This is where we learned the Flanders System. I feel it to be a worthwhile self-evaluation and will try it when I teach. It has made me aware of myself and the fact of the effect my behavior (even a single comment) on the students. I believe it could have been consolidated though. The course definitely needs a lecture for explanation, but too much time was allotted."

"The course is on the right track. Many mechanical difficulties must be ironed out such as lecture too big and too long, etc. But the rationale of self-evaluation is excellent. If you can get students to accept this you probably are 3/4 of the way to making much better teachers. The principle of flexibility you stress is also a must for "good" teachers. You have a lot to work with. This course in the future will probably be invaluable."

"I find it difficult to express in words exactly how valuable this course was to me. If I had to rank it, I would say that out of ALL my university courses, this has been one which has contributed most to my future welfare as a teacher and an individual. However, I can't separate it from my student teaching experience, as my supervisor used interaction analysis. It is a wonderful tool and I was very influenced
"Not meaty enough - more outside readings and statistical work. Attendance taking is insulting. More systems (other than Flanders) would lead to stimulating comparison. The course can handle more than it is. A teacher does not have to be everyone's pal in order to be respected. It is nice, but some take advantage. Students might be classed homogeneously as to student-teaching effectiveness. Too much use of same tapes and tapes in general. Probably would be improved with better tapes applicable to Secondary Education. Specific subject matter might be incorporated into Flanders system - different approaches to different subjects."

"Students might be notified of progress of experiment - call it propaganda publicity, a way to alumni."

"All in all it was an excellent, meaningful course. It gave me a tool to examine my behavior which tends to direct, and yet stimulate."

"Now I think it's good, but it took 12 weeks for me to see any reason for it or for things to crystallize."

"Interferes with task of teaching the material."

"A good thing for those who have never thought objectively about themselves. For those who have, and have already concluded that the indirect approach is the one to use (and the one they honestly prefer to use) it is pleasant, although repetitious reinforcement."

"I honestly feel this was the most practical Ed. course I have had. The reason being, that I could apply much of the theory, discussion, findings, etc. to my classes while student teaching."

"Good. My own lack of interest (preconceived because of previous experience in Sec. Ed.) was due to disinterest in beginning, which became a rut hard to escape from."

"Better than the run-of-the-mill courses in the department, but you cannot create an academic discipline on the basis of weak, inconsistent and repetitious material."

"Best education course I have ever had. It's the only one which offers concrete usable material. (Interaction Analysis) Thank you - I've learned a lot, and my outlook on teaching has changed in a positive way because of this course."

"It is tedious to be expected to repeat in an artificial situation what one has just finished doing in a real classroom."

"The first time I have been asked to look at myself as a person and a future teacher. I know the course will be a great..."
aid to me in the future. Best of all other Ed. courses I have taken."

"Feel that it can be a valuable aid in teaching. Helped focus on actual behavior of me as a teacher."

"I feel that the goals set by the instructors were reached. I feel that, most important of all, the course made me think about teaching and about myself as a teacher."

Table I summarizes the reactions of students to the Interaction Analysis and Learning Theory Courses.

**TABLE I**

A Summary of Students' Reactions to Interaction Analysis and Learning Theory Courses

<table>
<thead>
<tr>
<th></th>
<th>Negative</th>
<th>Neutral</th>
<th>Positive Short Comment</th>
<th>Positive Long Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING THEORY COURSE</td>
<td>4</td>
<td>12</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>INTERACTION ANALYSIS COURSE</td>
<td>3</td>
<td>24</td>
<td>7</td>
<td>15</td>
</tr>
</tbody>
</table>
Guidelines for Using Interaction Analysis

Those who have had extensive experience using Interaction Analysis with interns, student teachers and teachers in service, tend to agree that there are some general guidelines which might be helpful to people who want to use the system. These include general attitudes as well as helpful specific techniques and procedures. Some of the most important guidelines follow:

1. A person teaching Interaction Analysis will probably want those to whom he is teaching it to have a personal teaching experience to refer to during the period of instruction.

2. Between 12 and 30 hours of training in Interaction Analysis appears necessary if Interaction Analysis is to be effectively learned. If less than 12 hours is spent, students often fail to see the reason for learning the system. On the other hand, thirty hours is probably long enough to spend learning the fundamentals.

3. The person who teaches Interaction Analysis or supervises teachers who are learning Interaction Analysis will want to have spent time using Interaction Analysis as an observational tool himself before he attempts to help others become familiar with the observational procedure or interpret matrices.

4. The approach of the supervisor in the supervisory conference should probably be one of helping the teacher to clarify and understand his teaching pattern. The supervisor will want to use the matrix as a basis for presenting objective data to the teacher. One of the most difficult problems for supervisors is to avoid telling the teacher what to do. The approach which is perhaps most effective is for the student
teacher or intern to perceive the conference as a place where he will evaluate his own teaching with the help of the supervisor and Interaction Analysis.

5. As the basis for a conference with an intern or student teacher the supervisor will probably want to have either two matrices to compare or one matrix and a statement of the teaching goals. Effective conferences focus on such questions as "What evidence is there in the matrix to indicate that my teaching goals were achieved?" "How did the way I reacted to pupil comments differ in these lessons?" "What was there about the second matrix which would indicate an increase (decrease) in pupil interest in the lesson?"

6. Those who supervise students or who teach Interaction Analysis should attempt to communicate the point of view that Interaction Analysis is an approach which helps teachers focus on their OWN teaching. It is not the answer to all of the pressing problems in teacher education. It is useful to the extent that a teacher is willing to explore and analyze his own teaching, and it is only one way to look at the teaching-learning process.

7. Some people who teach Interaction Analysis to student teachers and interns become dismayed because of the resistance they encounter. This resistance indicates that the students are openly reacting to an attempt to get them to look at their teaching. They are probably reacting because they feel threatened by the prospect of an objective look at their teaching behavior. Apparently one of the best ways to work with the resistance is to accept it and help the students clarify it.
8. Once the student teacher or intern is comfortable with the tape recorder in his room, tapes can be used to provide specific teaching situations for analysis in seminars. These tapes give the student teacher or intern a way of bringing his own teaching into the seminar where he can have the help and reactions of his peers. It cannot be emphasized too strongly that the student teacher should only make a tape of his teaching if he really wants to.

9. If change in teacher behavior is desired, then the most meaningful learning of Interaction Analysis categories is accomplished if students can produce the categories behaviorally when they are given a list of category numbers. That is, it is perhaps more important for students to practice by taking a list of category numbers and then role-playing these categories than it is to be able to categorize a short sequence of interaction.

Most of those who have had extensive experience using Interaction Analysis in teacher education believe that Interaction Analysis does help the teacher gain insight into teaching and provides a tool which teachers can use to consciously change their behavior. If people continue to use Interaction Analysis and similar techniques, and continue to find significant changes in behavior and attitudes of student teachers then Interaction Analysis may indeed represent a significant step forward in teacher education. Perhaps the major contribution of Interaction Analysis research has been to focus the attention of teacher educators upon the idea that the classroom should be the central focus of study for those interested in the improvement of teaching and that if we are interested in improving teaching then it is the teacher's classroom behavior that we must be concerned with and attempt to change.