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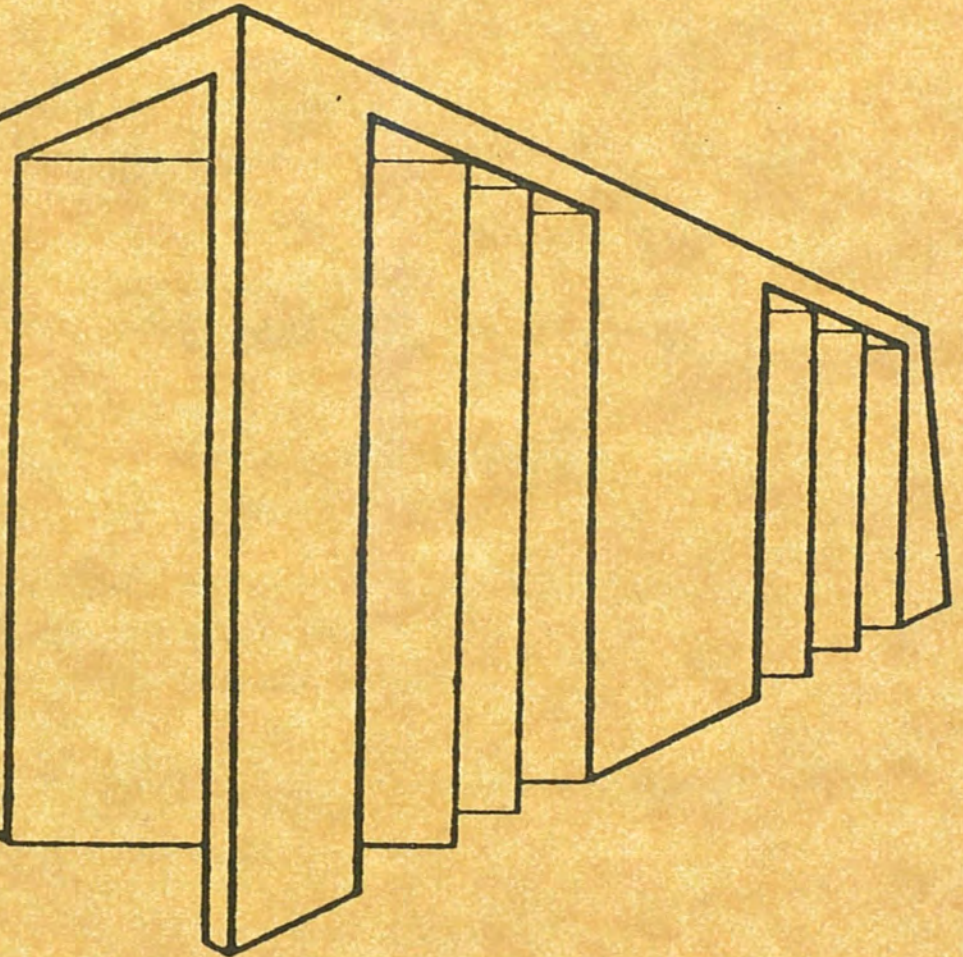
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IDEAS IN EDUCATION

COLLEGE of
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University of
Central Florida



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IDEAS IN EDUCATION

Fall 1984

VOLUME 2 NUMBER 1

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IDEAS IN EDUCATION:

Editor's Preface

The second issue of *Ideas in Education* continues a series of annual publications about ideas being developed, explored, and researched by the faculty members and graduate students of the College of Education of the University of Central Florida.

The articles included in this issue reflect research completed in the areas of social science, visual arts, peer tutoring, and teleconferencing. Additionally, several selections explore ideas related to cultural diversity, homosexuality, gifted students, physiology of learning, teacher evaluation, and the importance of new technology in the education of tomorrow's teachers.

This issue also includes dissertation abstracts from the work of the students who completed their doctoral degrees under the University of Central Florida/Florida Atlantic University Cooperative Doctoral Program.

Each of these ideas, whether those of faculty or students, are shared with the readers in hopes of extending the readers' thinking and their willingness to communicate their thoughts with the authors. New directions in education can only occur if a regular dialogue can develop between professionals in the field. All too often, ideas are generated, but not shared or challenged. Ideas which have not been presented for examination and review cannot help the professional educator seek better means of educating the various groups of people within a society.

Ideas In Education attempts to provide a forum for the sharing and challenging of ideas.

—*Marcella L. Kysilka*

GEOGRAPHIC CONCEPTS AND SKILLS AS BASIC COMPETENCIES FOR TEACHERS-IN-TRAINING: A RESEARCH REPORT

Frederick Green and Wentworth Clarke

RATIONALE.

Geographic concepts and skills have long been an important element of social studies instruction. Development of these concepts and study skills is important if students are to be able to interpret the symbolic representations of the earth or sections of the earth in order to better understand the geographic nature of the world in which they live. Through the use of maps and globes, students can also be led into a more complete understanding of historical events, scientific concepts about the earth, and sociological and economic relationships between people of the world. Furthermore, a thorough proficiency in map and globe skills is necessary to students, not only as they continue in their education, but perhaps, more importantly, as they become citizens of this vast and complicated world in which they will work, travel, make important decisions, and live out their lives.

Granted, then, that the study of map and globe skills should be a vital part of every student's education. But what are the implications for teachers who must teach these skills?

STATEMENT OF PROBLEM.

We need to know if prospective elementary school teachers are knowledgeable in the area of geography skills for four very important reasons. First, many states require that prospective teachers pass assessment tests in order to receive their teaching certificates. Questions about geography skills are usually included in these tests. Do teacher training institutes provide enough knowledge and practice in these important study skills and concepts to enable prospective teachers to pass this portion of the assessment without difficulty?

Second, at the present time most geography skills are taught in the elementary schools. Thereafter, students are expected to be well-versed in these skills and understandings. Instruction in them is usually incidental and cursory. Are elementary school teachers knowledgeable enough about geography skills to be able to pass this necessary knowledge along to their students by the time they finish the sixth grade?

Next, if prospective teachers do have weaknesses in their understanding of geography concepts and skills it is important that teacher

training programs know what these weaknesses are in order that the teachers might be better prepared in light of their deficiencies.

Finally, are prospective teachers' strengths and weaknesses changing as time progresses? If so, can we anticipate these trends and work to improve their deficiencies while maintaining their strengths?

METHODOLOGY.

In an attempt to answer these important questions, the present study was conducted at the University of Central Florida. The purpose of this research was to determine if student teachers have weaknesses in the area of geography study skills, and related concepts, and if so, to determine what those weaknesses might be. It was felt that a knowledge of possible weaknesses would have implications for changing the Social Studies methods courses for prospective teachers.

The sample population consisted of six hundred thirty-two elementary education majors, with the majority being in their junior year at college. All students were enrolled in the second of three internship experiences in the public elementary schools. The students attend their assigned schools four mornings each week for ten weeks, at which time they must teach one unit in Social Studies, as well as other assigned units. During these same afternoons, students attend classes at the University, one of which is a Social Studies methods class.

During the academic years from 1979 to 1984, elementary students in twenty seven sections of the above-mentioned Social Studies classes were given the Nystrom "Map and Globe Skills Diagnostic Test," a criterion-referenced test devised by Daniel R. Marken and Paul Bushue of Seattle, Washington. Classes were tested at the beginning of the Fall or Spring semesters.

The Nystrom instrument consists of sixty-nine questions which are arranged in twenty-three clusters according to the types of skills to be attained. Success with the instrument assumes a working knowledge of simple geographic concepts. Remedial lessons called "Where and Why?" can be obtained from the authors. These contain instruction in various activities designed to enhance knowledge in the skill clusters in which the students evidence weaknesses.

The perspective teachers for the 1979-1984 school years were compared. Frequencies for each year were computed and analyzed by individual test items. Then these items were compiled into appropriate skill groupings for comparison purposes. These tests were later analyzed using a standard T-test to detect significant differences between the 83 and 84 year samples as well as a comparison of the 80 to 83 totals versus the 84 sample. All answers were machine graded, recorded and analyzed

using an IBM 4341 computer equipped with *A Statistical Package for the Social Sciences - X Version*.

ANALYSIS OF RESULTS.

There were several methods used to analyze test results. Frequencies were run on the 80 thru 84 academic years, they were then combined with separate runs for the 83 and 84 academic years. This provided a composite picture of the past five years and a comparison of this year (84) versus last year (83). Frequencies were first run on individual test items. Then, combined into "skill categories" to show which groups were most often missed.

Four T-Tests were also performed on the raw data presented in the study. First, academic years '80 thru '83 were computed against 1984 and secondly, 1983 was compared to 1984. Both grouping comparisons were used for individual test items as well as skill groups.

The next step was to examine test items to determine their difficulty level, for the purposes of comparison. It was determined that a 40% incidence of failure on test items as well as skill area questions would indicate a strong weakness in those particular areas. Table 1 (see pg. 7) shows the listing of test items most often missed. Of the 69 items, nine were missed by more than 40% of the sample population.

Table I

1. Rank Listing Of Nystrom Test Items Missed By More Than 40% Of The Sample Population. (Comprehensive Scores, 1979-1984) (N=632)

Test Item No.	Skill	% of Students Missing Item In Accumulated 1980-84 Total (N=484)	% of Students Missing Item On Testing (N=143)	Accum. Total For 1979-84 (N=632)	Rank Order For 1979-84	Rank Order For 1984
31	Discriminate between world maps and globes for determining shape and size.	77.3	72.0%	79.6	1	2
32	Discriminate between a world map and globe for finding distances and direction.	75.6	74.8	75.9	2	1
49	Identify the Source of a river on a map.	61.6	63.6	63.6	3	4-5
47	Differentiate Between up-stream and down-stream of a river on a map.	61.2	63.6	63.6	4	4-5
46	Use contours of a map to determine direction of flow of a river.	60.5	61.5	62.3	5	6
48	Identify the mouth of a river on a map.	60.7	68.5	61.0	6	3
64	Compare the Climates of selected cities on the basis of differences in latitude and elevation.	58.3	59.4	59.8	7	7
59	Identify revolution and the earth's tilt as the cause of seasonal changes.	47.3	42.0	46.8	8	8
51	Identify and use a map legend to determine the meanings of selected symbols (state or provincial boundaries)	37.0	41.3	38.6	9	9

As can be seen from Table 2, the most difficult skills were pertaining to map and globe study. These students were asked to discriminate between a world map and a globe for determining shape and size, as well as using a globe or map for finding distances and direction. In other words, these students did not seem to understand the relative merits of a world map as compared to a globe, and they did not seem to know which could more effectively be used for determining sizes of continents, or distances from one point in the world to another.

Table 2

2. Rank listings of Nystrom Test items missed by more than 40% of the sample population. (Comprehensive scores, 1979-84) N=632.

Skill No.	Skill	% of Students Missing Item In Accum. 1980-84 Total (N=484)	% of Students Missing Item On Testing (N=143)	Accum. Total For 1979-84 (N=632)	Rank Order For 79-84	Rank Order For 1984
11	Discriminate between world maps and globes for determining shape and size.	77.3	72.0	78.9	1	1
12	Discriminate between a world map and globe for finding distance and direction.	75.6	74.8%	74.4	2	2
20	Identify revolution and the earth's tilt as the cause of seasonal changes.	66.3	59.4	66.8	3	5
17	Identify the mouth and source of a river on a map. Differentiate between upstream and downstreams, and use contours to determine direction of flow.	64.9	65.7	61.5	4	3
22	Compare the climates of selected cities on the basis of differences in latitude and elevation.	62.2	63.6	61.7	5	4
19	Use the terms rotation and revolution to distinguish between the earth's daily and yearly movements. Identify rotations as the cause of day and night. sunrise and sunset.	38.6	41.3	40.0	6	6

The third and sixth most commonly missed skills during the 1979 through 1984 academic years dealt with problems in understanding the identification of the earth's tilt as the cause of seasonal changes, as well as understanding the results of the earth's revolution and rotation. The earth's daily and yearly movements were not clearly understood by a wide portion of the sample.

The Next most difficult tasks involved identifying the mouth and source of a river on a map, differentiating between upstream and downstream, and using contours to determine the direction of flow. All four test items pertaining to these skills were missed by the majority of students.

The fifth area of weakness determined by this study involved comparing the climates of selected cities on the basis of differences in latitude and elevation.

Taking the data one step further, examination of the T-Tests showed some surprising results. There were seven test items which showed a significant rise or fall in their priority. These test items related to three skill groupings. Of these skill groupings only one, skill #20 was rated in the most frequently missed category. Table 3, (see pg. 10) shows the test items and Table 4, (see pg. 10) shows the skill groupings along with the level of significance associated with each item.

Table 4
T-Test Skill groups associated with the level of significance

Skill No.	Significance	T-Value	Estimate of 2-Tailed Probability
1	0.01	2.71	0.01
2	0.01	2.71	0.01
3	0.01	2.71	0.01
4	0.01	2.71	0.01
5	0.01	2.71	0.01
6	0.01	2.71	0.01
7	0.01	2.71	0.01
8	0.01	2.71	0.01
9	0.01	2.71	0.01
10	0.01	2.71	0.01
11	0.01	2.71	0.01
12	0.01	2.71	0.01
13	0.01	2.71	0.01
14	0.01	2.71	0.01
15	0.01	2.71	0.01
16	0.01	2.71	0.01
17	0.01	2.71	0.01
18	0.01	2.71	0.01
19	0.01	2.71	0.01
20	0.01	2.71	0.01
21	0.01	2.71	0.01
22	0.01	2.71	0.01
23	0.01	2.71	0.01
24	0.01	2.71	0.01
25	0.01	2.71	0.01
26	0.01	2.71	0.01
27	0.01	2.71	0.01
28	0.01	2.71	0.01
29	0.01	2.71	0.01
30	0.01	2.71	0.01
31	0.01	2.71	0.01
32	0.01	2.71	0.01
33	0.01	2.71	0.01
34	0.01	2.71	0.01
35	0.01	2.71	0.01
36	0.01	2.71	0.01
37	0.01	2.71	0.01
38	0.01	2.71	0.01
39	0.01	2.71	0.01
40	0.01	2.71	0.01
41	0.01	2.71	0.01
42	0.01	2.71	0.01
43	0.01	2.71	0.01
44	0.01	2.71	0.01
45	0.01	2.71	0.01
46	0.01	2.71	0.01
47	0.01	2.71	0.01
48	0.01	2.71	0.01
49	0.01	2.71	0.01
50	0.01	2.71	0.01

Table 3**3. Test items or skill group associated with the level of significant change.**

Test item No.	Skill	T-value 80-83 Versus 84 Samples	Estimate of stated Probability	T-value 83 versus 84 Samples	Estimate of stated Probability
10	Name and properly orient the main directions in relation to one another.	-2.25	.025		
18	Name and orient the 4 intermediate directions in relation to one another.			2.27	.025
25	Identify lines of latitude and match synonym (parallel).	-4.25	.000		
26		-3.42	.001		
27	Identify lines of longitude and match synonym (meridan)	-4.192	.000		
28		-3.48	.001		
42	Correctly identify the names of the four oceans and seven continents on an outline map.			2.14	.034
48	Identify the mouth and source of a river on a map. Differentiate between upstream and downstreams, and use contours to determine direction of flow.	2.34	.020		
60	Identify revolution and the earth's tilt as the cause of seasonal changes.			-2.20	.029
61	Compare time differences by using longitude.	-2.01	.045		

Table 4**4. Test skill groups associated with the level of significant change.**

Skill No.	Skill	T-Value 80-83 Versus 84 samples	Estimate of 2-Tailed Probability	T-Value 83 versus 84 samples	Estimate of 2-Tailed Probability
8	Identify lines of latitude and match synonym (parallel).	-4.57	.000		
9	Identify lines of longitude and match synonym (meridan).	-4.97	.000		
20	Identify revolution and the earth's tilt as the cause of seasonal changes.	-2.17	.031	-1.99	.047

A major item worth noting is a comparison of the skills with a significant level of change versus their rating on the most frequently missed skills list. As you will note, only skill #20 appears on both lists. All other skills which were frequently missed were steady in their low level of performance over the past 6 years. An analysis of this can be seen in Table 5

Table 5.

5. Skill areas missed by 40% or more over a six year period along with their T-Value and estimated Probability for all class samples.

Skill No.	Skills	% of Students Missing Items 79-84	T-Value	Estimated Probability
11	Discriminate between a world map and globe for determining shape and size	78.9	-1.71	.089
12	Discriminate between a world map and globe for finding directions and distances	74.4	-.26	.794
20	Identify revolution and the earth's tilt as the cause of seasonal changes.	66.8	-1.99	.047
22	Compare the climates of selected cities on the basis of differences in latitude and elevation.	61.7	1.14	.254
17	Identify the mouth and source of a river on a map. Differentiate between upstream and downstreams, and use contours to determine direction of flow.	61.5	1.30	.195
19	Use the terms rotation and revolution to distinguish between the earth's daily and yearly movements. Identify rotation as the cause of day and night, sunrise and sunset.	40.0	.42	.673

CONCLUSIONS.

What are the implications of this study? The data indicate that the average elementary education major in the sample studied does not have a complete grasp of knowledge about map and globe skills and accompanying geographic concepts, and in fact, shows major weaknesses in six of the twenty-three skill areas that are tested on the Nystrom instrument. This might be due to shortcomings in the early education programs. Whatever the cause, it seems likely that we must increase the proficiency of teachers in training regarding map and globe skills if indeed, they are to be more able to provide activities and experiences for their students which will enhance the necessary map and globe skills. Teacher education should focus on the six above-mentioned skill areas, and could take place at both the pre-service and in-service levels. At the preservice level, perhaps it could take form of a geography course for education majors, whereas inservice training might consist of a condensed course of map and globe skills.

If offering a new geography course at the preservice level is not a possibility, perhaps the present study can serve as a model for a viable alternative. At the beginning of a required social studies course for education majors, the Nystrom instrument, or one like it, can be administered to students. Remediation in the skills areas in which students are weak can then be a requirement of the course. At the end of the course, the same test can again be administered, this time counting as a portion of the student's total grade. Perhaps the added incentive of working for a grade would serve to close the gap even further between the map and globe study skills one brings to the course, and those acquired as a result of it.

As can be seen from the statistics presented, in the majority of cases there has been no significant change in student results on the Nystrom test for the past six years. This seems to be indicative of the fact that there are constant weaknesses appearing over an extended period of time. Either of two possibilities exist, first, the skills themselves need to be looked at and a decision made as to their relevance to geography, or measures need to be taken to improve these deficiencies.

It needs to be noted that some skills, (see Table 5) are continuing their decline from bad to worse. The three most frequently missed skills are slowly becoming more so. This points toward a growing concern for instruction in those weak areas.

If we, as educators, feel that a knowledge of map and globe skills is important in this world of rapid communication, global transportation, increased pollution, and ever-changing social, political, and physical boundaries, then we must be certain that our elementary school teachers are adequately prepared to teach them.

SKILLS FOR THE ELEMENTARY ART TEACHER

Virginia Barr-Johnson, Ph.D.

The purpose of this study was to survey what preservice and inservice elementary classroom teachers think they need to know about art processes and the skills they should possess or acquire in order to teach art to their students. Even though educators agree that art should ideally be taught by art specialists, many elementary students must depend on the elementary classroom teacher for all of their instruction in art. Exact statistics are difficult to obtain, but according to Linderman's findings (1979) ninety percent of elementary art in American schools was being taught by the elementary classroom teacher. About fifteen to twenty percent of this group had the benefit of art specialists as helpers to the classroom teacher, the remaining ten percent had art specialists as teachers, but the students met with the art teacher anywhere from twice a week to once a month.

Acting on this information, the literature was reviewed to determine what art educators thought about who should teach art in the elementary school and what that teacher needed to know about art. Four patterns of art education were described by Sawyer and deFrancesco (1971): (1) art teaching by an itinerant specialist who goes from school to school; (2) art teaching by a resident specialist with responsibility for only one school; (3) art teaching by the classroom teacher with the specialist acting as consultant; and (4) cooperative art teaching by both classroom teacher and art specialist. In the last category, the classroom teacher's role is to coordinate art lessons with learning activities in other areas in order to create a crossdisciplinary experience for the child. This arrangement was favored by Sawyer and deFrancesco because they felt the classroom teacher could bring to the child's art education a personal understanding that the art specialist could not have; a knowledge of his immediate needs, abilities, skills and attitudes, as well as the balance and continuity of his total learning.

Gaitskell and Hurwitz (1970) asked the question, "Who can teach art?" and responded "any teacher who has sufficient ability, tact, and liking for children." They indicated a need for the teacher to acquire some knowledge of pictorial composition and other forms of design and some ability to use such media as paint, wood, and clay but they felt it is possible for a proficient teacher in an elementary classroom to be a capable teacher of art.

How do we define a classroom teacher of art? Linderman and Herberholz (1974) stated that an art teacher (a classroom teacher who teaches art to his pupils) is someone who can translate the essence of art into the sort of information that children can absorb at their particular level of development. The teacher should have a supreme interest in

children and a strong desire to learn enough about art himself to be able to teach it with confidence and skill. "The creative teacher places first emphasis on encouraging in his students options for self-discovery, through media exploration, subject search, learning to evaluate and knowing what to look for in art"(p. 10).

Notwithstanding the ideal situation where an art specialist is the art teacher, and an artist would seem the most logical person to teach art, Lowenfeld and Brittain (1975) concluded that a classroom teacher might seem better equipped than an artist to be close enough to the child each day to ascertain his developmental level and to perceive the individual child's need. They wrote, "Whether or not a person working with young children calls himself an artist or a teacher may be incidental. . .what is needed is a person who is warm, friendly, and democratic, someone who wants to help children develop their own concepts, is genuinely interested in what children paint, and has no preconceived notions of what each project should be like (p. 97)."

Thus, the experts in art education agree that while an art specialist to teach every child would be an ideal situation, the classroom teacher possesses many attributes to become a successful teacher of art, but they concur that these teachers must acquire some art skills and some knowledge about art processes and art appreciation in order to help children learn through the activities and experiences embodied in art.

This study asked prospective and practicing elementary classroom teachers what they thought they needed to know in order to teach art to their students. What were they lacking? What did they know already? What did they value in art? If they lacked the skill, did they plan to acquire it, and did they plan to teach it to their students?

METHODS AND PROCEDURES

One hundred eight university students enrolled in required for state certification undergraduate classes (ARE 4313, Art in the Elementary School) completed questionnaires inquiring about a wide variety of art activities and experiences. These questionnaires were administered at the beginning of the course before the students were introduced to the art processes and skills. The respondents checked the following statements: "Not needed," "Already have this skill," "Need to learn more," "Plan to teach to students," and "Need to know for myself," in respect to these ten categories: Drawing, Painting, Printmaking, Fiber and Fabrics, Metals, Sculpture, Lettering, State/Costume Design, Photography/Audio-Visual, and Art Appreciation. These categories were further subdivided into a total of 48 processes and skills involving different media and activities.

The data were analyzed and placed on linear graphs showing percentages of responses in each category. Linear graphs were not

completed for the column "Not needed" as it was only slightly responded to by the preservice and inservice teachers, and for the column "Need to know for myself" which correlated with "Need to learn more" in a large number of instances. More than one column could be checked under each of the processes and skills.

ANALYSIS OF DATA

In Figure 1, (see *pg. 16*) "Already have this skill." the highest percentages appears in Lettering and the lowest in Metals, with 2 percent in Wire and less than 1 percent in Enameling and Jewelry. Under Lettering, Murals rated 13 percent, Posters and Bulletin Boards, 30 percent each.

The highest percentages of felt needs appears in Figure 2, (see *pg. 17*) "Need to know more," with a range of 42 percent to 80 percent over all ten categories. The highest needs to know were in Sculpture and the lowest in Fiber and Fabrics. In Drawing, the subdivisions of Figure Drawing, Portrait, Landscape, Still Life, Animals, Perspective and Cartooning had a narrow range with all responses from 60 to 66 percent needing to know more. However, in Painting; Tempera rated 65 percent, Watercolor 56 percent, Acrylic 63 percent, and Fingerpainting only 43 percent. Art Appreciation received ratings of 55 percent for Art History, 58 percent for Art Criticism, 61 percent for Art Evaluation, and 55 percent for Art Competition or Art Judging.

"Plan to teach to students" Figure 3 (see *pg. 18*) rated lower overall than "Need to know more." Fingerpainting rated a high of 66 percent and the low was 9 percent in Fashion Design. The drop from "Need to know more" to "Plan to teach to student," averaged from 20 to 30 percent.

Figure 1

Percentage of Response to "Already have the skill"

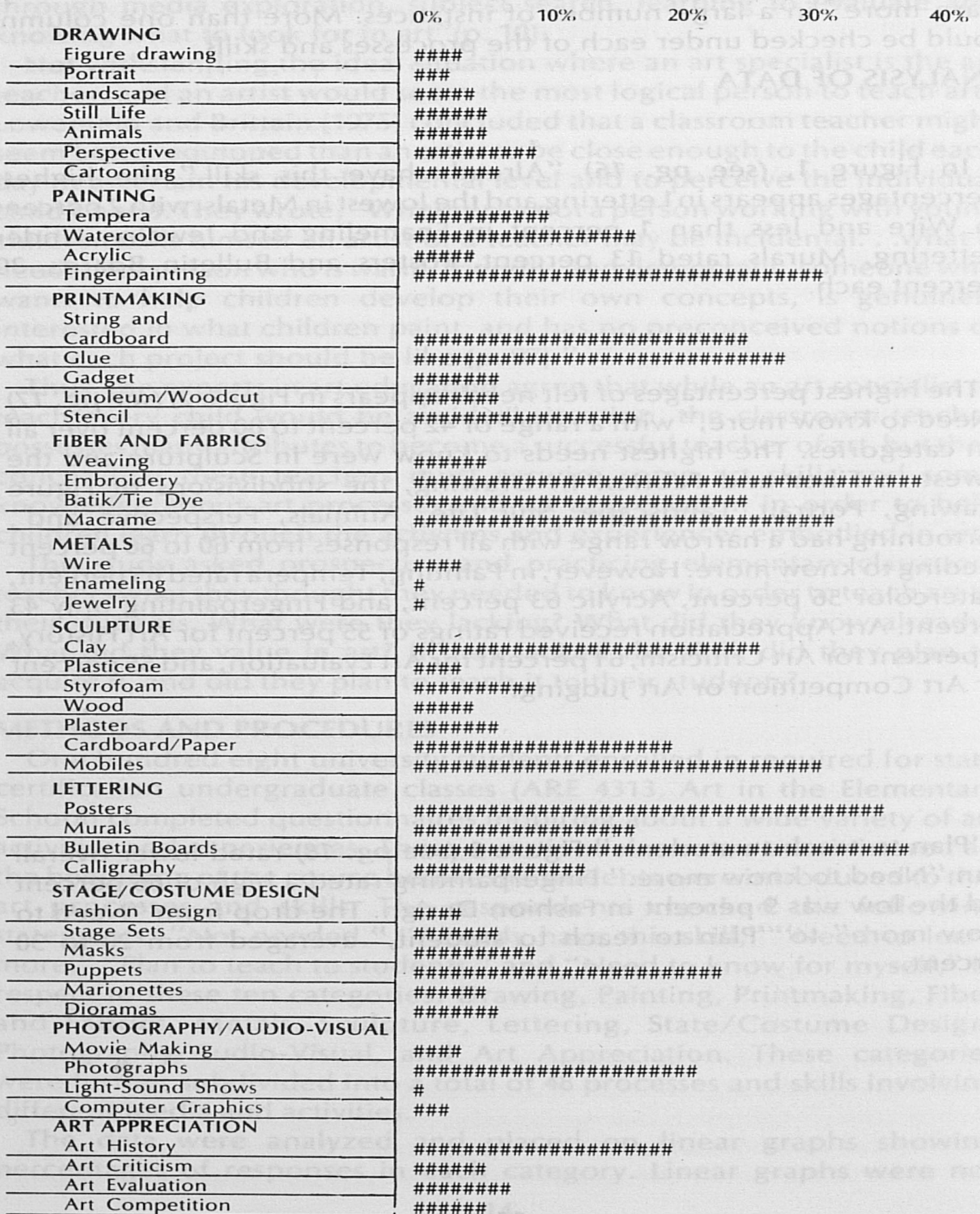


Figure 2
Percentage of Response to “Need to Learn More”

	10%	30%	40%	50%	60%	70%	80%
DRAWING							
Figure drawing	#####						
Portrait	#####						
Landscape	#####						
Still Life	#####						
Animals	#####						
Perspective	#####						
Cartooning	#####						
PAINTING							
Tempera	#####						
Watercolor	#####						
Acrylic	#####						
Fingerpainting	#####						
PRINTMAKING							
String and							
Cardboard	#####						
Glue	#####						
Gadget	#####						
Linoleum/Woodcut	#####						
Stencil	#####						
FIBER AND FABRICS							
Weaving	#####						
Embroidery	#####						
Batik/Tie Dye	#####						
Macrame	#####						
METAL							
Wire	#####						
Enameling	#####						
Jewelry	#####						
SCULPTURE							
Clay	#####						
Plasticene	#####						
Styrofoam	#####						
Wood	#####						
Plaster	#####						
Cardboard/Paper	#####						
Mobiles	#####						
LETTERING							
Posters	#####						
Murals	#####						
Bulletin Boards	#####						
Calligraphy	#####						
STAGE/COSTUME DESIGN							
Fashion Design	#####						
Stage Sets	#####						
Masks	#####						
Puppets	#####						
Marionettes	#####						
Dioramas	#####						
PHOTOGRAPHY/AUDIO-VISUAL							
Movie Making	#####						
Photographs	#####						
Light-Sound Shows	#####						
Computer Graphics	#####						
ART APPRECIATION							
Art History	#####						
Art Criticism	#####						
Art Evaluation	#####						
Art Competition	#####						

Figure 3
Percentage of Response to “Plan to Teach Students”

	10%	30%	40%	50%	60%
DRAWING					
Figure drawing	#####	#####	#####	#####	#####
Portrait	#####	#####	#####	#####	#####
Landscape	#####	#####	#####	#####	#####
Still Life	#####	#####	#####	#####	#####
Animals	#####	#####	#####	#####	#####
Perspective	#####	#####	#####	#####	#####
Cartooning	#####	#####	#####	#####	#####
PAINTING					
Tempera	#####	#####	#####	#####	#####
Watercolor	#####	#####	#####	#####	#####
Acrylic	#####	#####	#####	#####	#####
Fingerpainting	#####	#####	#####	#####	#####
PRINTMAKING					
String and Cardboard	#####	#####	#####	#####	#####
Glue	#####	#####	#####	#####	#####
Gadget	#####	#####	#####	#####	#####
Linoleum/Woodcut	#####	#####	#####	#####	#####
Stencil	#####	#####	#####	#####	#####
FIBER AND FABRICS					
Weaving	#####	#####	#####	#####	#####
Embroidery	#####	#####	#####	#####	#####
Batik/Tie Dye	#####	#####	#####	#####	#####
Macrame	#####	#####	#####	#####	#####
METAL					
Wire	#####	#####	#####	#####	#####
Enameling	#####	#####	#####	#####	#####
Jewelry	#####	#####	#####	#####	#####
SCULPTURE					
Clay	#####	#####	#####	#####	#####
Plasticene	#####	#####	#####	#####	#####
Styrofoam	#####	#####	#####	#####	#####
Wood	#####	#####	#####	#####	#####
Plaster	#####	#####	#####	#####	#####
Cardboard/Paper	#####	#####	#####	#####	#####
Mobiles	#####	#####	#####	#####	#####
LETTERING					
Posters	#####	#####	#####	#####	#####
Murals	#####	#####	#####	#####	#####
Bulletin Boards	#####	#####	#####	#####	#####
Calligraphy	#####	#####	#####	#####	#####
STAGE/COSTUME DESIGN					
Fashion Design	#####	#####	#####	#####	#####
Stage Sets	#####	#####	#####	#####	#####
Masks	#####	#####	#####	#####	#####
Puppets	#####	#####	#####	#####	#####
Marionettes	#####	#####	#####	#####	#####
Dioramas	#####	#####	#####	#####	#####
PHOTOGRAPHY/AUDIO- VISUAL					
Movie Making	#####	#####	#####	#####	#####
Photographs	#####	#####	#####	#####	#####
Light-Sound Shows	#####	#####	#####	#####	#####
Computer Graphics	#####	#####	#####	#####	#####
ART APPRECIATION					
Art History	#####	#####	#####	#####	#####
Art Criticism	#####	#####	#####	#####	#####
Art Evaluation	#####	#####	#####	#####	#####
Art Competition	#####	#####	#####	#####	#####

RESULTS

The survey (Table 1) shows a definite perceived need of the preservice and inservice teachers to enhance their own art skills and to increase their own knowledge about art in order to be more confident in the classroom teaching art and to be able to enrich their students' learning experiences through art.

Table # 1
ART SURVEY

Certification for elementary teachers includes ARE 4313 Art in Elementary School. Which art skills and art processes do you need to know about in order to teach art to your elementary students?

	Not Needed	Already have this skill	Need to learn more	Plan to teach to students	Need to Know for myself
DRAWING					
Figure drawing	.037	.037	.500	.416	.342
Portrait	.159	.018	.600	.287	.281
Landscape	.083	.046	.629	.305	.305
Still Life	.046	.046	.629	.351	.287
Animals	.046	.046	.638	.490	.324
Perspective	.037	.083	.620	.370	.287
Cartooning	.074	.055	.657	.314	.259
PAINTING					
Tempera	.037	.092	.648	.462	.203
Watercolor	.009	.157	.564	.592	.222
Acrylic	.074	.037	.629	.324	.203
Fingerpainting	.009	.259	.435	.666	.120
PRINTMAKING					
String and Cardboard	.000	.231	.462	.592	.166
Glue	.000	.222	.435	.481	.111
Gadget	.037	.046	.592	.305	.176
Linoleum/Wood cut	.101	.064	.574	.259	.194
Stencil	.046	.138	.620	.388	.166
FIBER AND FABRICS					
Weaving	.111	.046	.648	.314	.194
Embroidery	.129	.314	.426	.166	.212
Batik/Tie Dye	.083	.194	.490	.388	.235
Macrame	.101	.240	.500	.287	.250
METAL					
Wire	.129	.027	.620	.212	.240
Enameling	.194	.009	.555	.129	.268
Jewelry	.157	.009	.564	.231	.314
SCULPTURE					
Clay	.009	.212	.555	.592	.203
Plasticene	.055	.027	.731	.212	.194
Styrofoam	.027	.074	.685	.398	.166
Wood	.074	.037	.685	.240	.157
Plaster	.064	.064	.657	.287	.129
Cardboard/Paper	.037	.137	.600	.472	.138
Mobiles	.009	.231	.537	.546	.157

	Not Needed	Already have this skill	Need to learn more	Plan to teach to students	Need to Know for myself
LETTERING					
Posters	.009	.305	.481	.564	.222
Murals	.018	.128	.500	.537	.194
Bulletin Boards	.037	.305	.435	.435	.287
Calligraphy	.111	.092	.574	.185	.324
STAGE/COSTUME DESIGN					
Fashion Design	.250	.027	.537	.092	.222
Stage Sets	.074	.074	.629	.250	.203
Masks	.037	.092	.629	.462	.166
Puppets	.000	.194	.546	.564	.138
Marionettes	.084	.046	.583	.287	.166
Dioramas	.084	.055	.600	.333	.148
PHOTOGRAPHY /AUDIO-VISUAL					
Movie Making	.203	.027	.564	.166	.259
Photographs	.111	.157	.518	.296	.240
Light-Sound Shows	.157	.629	.629	.129	.222
Computer Graphics	.129	.657	.657	.296	.351
ART APPRECIATION					
Art History	.037	.129	.555	.314	.277
Art Criticism	.084	.055	.583	.203	.287
Art Evaluation	.046	.074	.611	.287	.296
Art Competition	.101	.046	.555	.185	.268

OTHER

“Ceramics”

“Pastels

“Drama/Acting

“Oral Interpretation”

“Poetry”

COMMENTS:

“I have insufficient background in art to respond with more variety.”

“I guess everyone needs to start somewhere. I am at the ready to learn stage.”

“I need to learn more before I teach.”

“I like the idea of teaching a wide variety of art processes and art skills but I need to know more before I can teach these skills. I would also like to learn a lot of these skills for myself.”

“I have had a few touch-and-go experiences with some of these areas but I feel I couldn't teach any of them effectively.”

“I definitely need to know more on most of these subjects. I also plan to teach them to my students. I believe that these are very necessary.”

Some of the responses clearly indicate the kinds of art experiences the respondents themselves experienced in the classroom when they were in elementary school. For example, Fingerpainting, Bulletin Boards and Embroidery rated the lowest in "Need to learn more." In Sculpture, Plasticene received the highest rating on the questionnaire with 73 percent needing to know more presumably because they did not relate it to the more familiar designation, Modeling Clay. In the same circumstances, Calligraphy was not perceived as a useful form of lettering in the classroom and only 18 percent stated they would "Plan to teach to students" that skill. Fashion Design was rated very low with only 9 percent finding it useful to teach to students. Unfortunately, the Art Appreciation Skills of knowing about Art History, Art Criticism, Art Evaluation, and Art Competition or Judging scored very low in the "Plan to teach to students" category with only 18 to 31 percent valuing those skills.

In the "Need to know for myself" column, the highest rating was in Computer Graphics with 35 percent responding, a reflection of the current trend toward use of the computer in the schools. Some of the consistently higher ratings in the "Need to know for myself" appeared in the Drawing categories. The present emphasis on the right side of the brain experiences in the classroom and the response to their importance in educating the whole child have made the teachers aware of drawing as an alternate means of expression. Figure Drawing ranked the highest with 37 percent and Cartooning the lowest with 28 percent; these being the highest overall in all of the categories.

DISCUSSION

Preservice and inservice elementary classroom teachers do sense a need to become teachers of art. They are very insecure in their present skills and knowledge of art; they recognize a need to learn more and even want to acquire some of the skills for personal reasons; but they still do not plan to teach as much art in their classrooms as would probably benefit the child. Much of the work that students do in elementary school involves the same kinds of activities that exist in art but the teachers do not perceive them as being art activities. Social studies, language arts, natural science, mathematics, and reading and writing experiences encompass many activities that are art oriented. Project Implode (1971) explored interdisciplinary experiences wherein each child's multi-talents were developed. Divergent, convergent, and evaluative productive thinking were recognized; creativity, planning, communication, forecasting, and decision-making skills were fostered. Many art-related activities were incorporated in helping the children to develop their fullest intellectual capacities.

Educators Eisner (1983) and Day (1979) have pointed out the need to

engage all the senses of the child in learning. The connection between the senses and the mind is a unified one and the "sensing" and the "minding" go hand in hand. Each of the senses help the child to form images with art being a means of helping the child to engage all of the senses in learning and expression. Sensory qualities enable him to move from conception of his physical world to representation of it. "Creative working involvement requires a focusing which is given by the individual in positive response to his environment" (Montgomery, 1983, p. 188).

Some elementary classroom teachers, in their concern for avoiding mistakes in teaching art, fail to provide any kind of guidance and the child suffers as a consequence. The schools in New Zealand are extremely dedicated to engaging the child in art and art is considered a necessary and worthwhile part of the curriculum. Their rationale is as follows: The visual images of children are spontaneous and unself-conscious responses to their immediate experience, though often in naive' terms compared with adult statements. However, to assume that childrens artistic growth will occur naturally is a misconception. Development in art requires stimulation and guidance, or there will come a time when there is a distinct gap between young people's need to express "self" and their ability to do so. The teacher's responsibility is to encourage all pupils, at every level, to make personal statements in visual form and to equip all pupils with the skills to make those statements and to judge the quality of their own work (New Zealand Department of Education, 1978, p. 52).

This study raises some questions about the amount and quality of the training elementary classroom teachers are provided in their own education prior to entering teacher education.

The best teachers of elementary art, whether classroom teacher or special art consultant, are creative, innovative, and adaptive people. They work hard to understand the basic premises, techniques, and evaluative processes of the creative act; they learn how to organize materials, tools, space, and time schedules to produce exemplary working conditions in classroom or art room, and they structure and implement the art program to meet the present and future needs of their students. They enrich the lives of their pupils through daily experiences in some phase of art discovery. . .in their enthusiasm, which they display unselfishly, they encourage the youngsters to open their eyes to the design, color, form, rhythm, texture, balance, and pattern in the world around them, in both natural and man-made wonders (p. 29).

BIBLIOGRAPHY

- Day, M. D. Child art, school art, and the real world of art. In S. M. Dobbs, (Ed), *Arts education and back to basics*. Reston, Virginia: National Art Education Association, 1979.
- Eisner, E. W. On the relationship of conception to representation. *Art Education*, 1983, 36(2), 22-27.
- Fisher, E. F. *Aesthetic awareness and the child*. Itasca, Illinois: F. E. Peacock Publishers, 1978.
- Gaitskell, C. D., & Hurwitz, A. *Children and their art* (2nd ed.). New York: Harcourt, Brace & World, 1970.
- Linderman, E. W., & Herberholz, D. W. *Developing an artistic and perceptual awareness* (3rd ed.). Dubuque, Iowa: Wm. C. Brown, 1974.
- Linderman, M. M. *Art in the elementary school*. Dubuque, Iowa: Wm. C. Brown, 1979.
- Lowenfeld, V., & Brittain, W. L. *Creative and mental growth* (6th ed.). New York: Macmillan, 1975.
- Montgomery, C. *Art for the teachers of children* (2nd ed.). Columbus, Ohio: Charles E. Merrill, 1973.
- New Zealand Experience: Art in Schools*. Department of Education. Wellington, New Zealand, 1978.
- Project Implode. *Igniting Creative Potential*. Salt Lake City, Utah: Author, 1971.
- Sawyer, J. R. & deFrancesco, I. L. *Elementary school art for classroom teachers*. New York: Harper & Row, 1971.
- Wachowiak, F. *Emphasis Art* (3rd ed.). New York: Thomas Y. Crowell, 1977.

A STUDY OF PEER TUTORS USING THE NEUROLOGICAL IMPRESS METHOD

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STUDY OVERVIEW

The purpose of this study was to determine the efficacy of using the neurological impress method in peer tutoring during reading instruction.

Ten sixth graders were taught by the reading specialist to implement the neurological impress method while tutoring ten fourth graders in reading. These tutors were selected by the classroom teachers on the basis of ability, personality, independence and dependability. The fourth graders were selected by the classroom teachers on the basis of reading disability, desire to learn to read and dependability.

Of the ten fourth grade subjects, there was a range of abilities' I.Q. 86-112, based on the Peabody Picture Vocabulary Test. Before treatment, the range of reading abilities was 2.0 to 3.5 in silent reading and 2.0 to 4.0 in oral reading. The mental age range was 7.3 to 9.5; whereas, the chronological age range was 9.5 to 10.9.

Each sixth grade tutor employed the neurological impress method with one fourth grade student, 15 minutes daily for 12 consecutive weeks. Both tutor and tutee signed a contract agreement and checked in with the researcher on a daily basis. The researcher was present during each tutoring session.

The materials used were library books chosen by the fourth grade students. Each student averaged completing one to two books weekly as compared to one to two books per month before this program began.

Statement of the Problem

With the increase in class size, teachers find it difficult to give enough one-to-one assistance during reading instruction. Many students fall behind simply because of this lack and as they flounder, self-confidence suffers. This, then, compounds the already frustrating problem of having difficulty reading. Thus, there seems to be a need to reach pupils with help other than the teacher who is already split thirty ways.

Significance of the Study

Ways need to be found to meet the needs of individual students. If peer tutors can be trained to assist in ameliorating this problem, it should be made known. Every teacher can use extra hands in order to better utilize time in direct instruction. It seems that needed practice and reinforcement can be afforded pupils through the use of tutors.

Limitations of the Study

Due to scheduling problems, only ten sixth graders were available for

this study. Thus, only ten fourth graders were able to avail themselves of this opportunity.

THE NEUROLOGICAL IMPRESS METHOD

The neurological impress reading method is a unison reading procedure in which the student and teacher or tutor read aloud simultaneously and quickly. It is especially suitable for students who have not profited from intensive phonics instruction during the primary grades.

The teacher and reader jointly hold the book. The student is placed slightly in front of the teacher so that the teacher's voice is directed into the student's ear at close range as they read the same material in unison (Trela, 1977).

This approach to reading is spontaneous, and as few pauses as possible are made during this reading process. The teacher attempts no sound or word recognition instruction and the student is not corrected at any time but is encouraged to refrain from stopping on difficult words. It is recommended that the method be used in fifteen minute sessions: a minimum of twelve hours work over a period of three months.

REVIEW OF LITERATURE

The first researcher and developer of the neurological impress method (NIM) was R. G. Heckleman in 1952. He used the method with high school students who were disabled readers. The first ninth grade student employed the method for three months and after 12 hours her reading level increased three grades, from 3.0 to 6.0. Later, six tenth graders used the NIM method for 10 minutes a day for 12 hours, resulting in a mean reading gain of 2.2 grade levels.

Since Heckleman's introduction of the neurological impress method, other studies with elementary age students have occurred using modified forms of that technique. Some of these modified forms are the echo reading (Montieth, 1978 and Schneeberg, 1977); verse choir (Provenmire, 1977); and read-along tapes (Schneeberg, 1977 and Montieth, 1978).

The neurological impress method has been successfully used with learning disabled students at elementary and secondary levels (Oliver, 1979 and Stinner, 1979). Both studies yielded significant gains in word recognition and comprehension. In Stinner's study, sixth grade tutors were used to work with fourth grade students.

Information regarding the feasibility of using the NIM technique in developmental reading classes with peer tutors has not been collected. Thus, this study was conducted to examine this possibility in reading instruction.

COLLECTION OF DATA

The instruments used in this study were the Peabody Picture Vocabulary Test, the Silvaroli Informal Reading Inventory, forms A and B, and the Houghton Mifflin Silent Reading Placement Tests.

The Peabody Picture Vocabulary Test was used to determine a Mental Age and I.Q. measure based on functioning vocabulary. Since vocabulary ability is a natural indicator of reading ability this test was assumed to be adequate for the purpose of this study. From this I. Q. measure, each child's Reading Expectancy Level could be computed using the Bond-word Recognition Expectancy Formula. This information was used to determine how much growth might be expected.

Prior to treatment, the Silvaroli Informal Reading Inventory, form A was administered to each child in order to obtain oral reading levels in word recognition and in comprehension. Form B was used as a posttest after treatment.

The Houghton Mifflin Silent Reading Placement Tests were used after treatment as a comparison to the oral tests and to facilitate correct placement in the basal reader that was used by the school.

ANALYSIS OF DATA

Table 1 presents the Chronological Ages and the computed Mental Ages, I.Q., and Reading Expectancy Levels of each fourth grade student.

TABLE 1
Student Chronological Ages,
Mental Ages, I.Q., and Reading Expectancy Levels

Student	C.A.	M.A.	I.Q.	R.E.L.
1	9.9	9.5	96	4.6
2	10.9	7.7	100	4.8
3	9.5	7.3	93	4.5
4	9.8	8.1	112	5.2
5	10.9	9.5	86	4.2
6	9.7	9.0	102	4.9
7	10.0	8.4	87	4.3
8	10.2	8.6	88	4.3
9	10.4	8.10	98	4.7
10	9.8	7.11	99	4.7

These ranges in Chronological Ages, Mental Ages and I.Q. measures are: C. A., 9.5-10.9; M.A., 7.3-9.5; and, I.Q., 93-112. According to the Reading Expectancy Formula, each student should be reading at least on grade level.

The initial reading levels are shown in Table 2. The range of ability in silent reading was 2.0-3.5. The range of ability in oral reading is given in two areas, word recognition and comprehension, which are: W/R, 2.0-4.0; and, C, 2.0-3.5.

TABLE 2
Initial Reading Levels

Student	Oral		Silent
	W/R	C	
1	2.0	2.0	2.0
2	2.0	2.0	2.0
3	3.0	2.5	2.5
4	2.0	3.0	3.5
5	3.5	2.0	2.5
6	3.0	2.5	2.5
7	3.0	2.0	2.0
8	4.0	2.0	2.5
9	3.0	3.0	3.0
10	2.0	3.0	3.0

Posttests results are recorded on Table 3. Alternate forms of the initial tests instruments were administered to each fourth grade student in this program.

TABLE 3
Posttest Results

Student	Oral		Silent
	W/R	C	
1	3.0	3.0	3.0
2	3.0	3.0	3.0
3	3.0	3.0	3.0
4	5.0	4.0	4.0
5	5.0	4.0	3.5
6	4.0	4.0	3.5
7	5.0	4.0	3.5
8	5.0	3.0	4.0
9	5.0	4.0	4.0
10	3.0	3.0	3.5

Each student showed gains in some areas. Only two students failed to gain one area: Student 3 evinced 0 gain in oral word recognition; and Student 10 showed 0 gain in oral comprehension. However, both of

these students gained in other areas. The least amount of gain was .5 (5 months) to 3.0 (3 years) reading growth. Student 4 gained three years in oral word recognition (word lists) only. The highest gain in comprehension was 2.0 (2 years) and in silent reading, 1.5 (one and one half years). These results are recorded in Table 4.

TABLE 4
Reading Gain After Treatment

Student	Oral		C	Silent
	W/R			
1	1.0		1.0	1.0
2	1.0		1.0	1.0
3	.0		.5	.5
4	3.0		1.0	.5
5	1.5		2.0	1.0
6	1.0		1.5	1.0
7	2.0		2.0	1.5
8	1.0		2.0	1.5
9	2.0		1.0	1.0
10	1.0		.0	.5

CONCLUSION

Based on this study, it is felt that the neurological impress method does show promise as a tutorial technique in the developmental reading program. Also, use of peer tutors is a viable alternative to the crowded classroom problems which prevent enough one-to-one instruction. However, more studies should be replicated along this line. The sample size prevents didactic generalizations to other students in other situations.

SUMMARY

This study was conducted in order to determine the effectiveness of the use of the neurological impress method by peer tutors in a reading situation.

Ten fourth graders received treatment administered by ten sixth grade tutors, fifteen minutes daily, for twelve weeks. Each student was committed to the program and under signed contract to participate.

Affective outcomes were noted. The dyads of tutor/tutee developed bonds of friendship. Each student showed enthusiasm about the apparent improvements in reading, and verbally stated so. Each tutor

and his pupil remained dependable and motivated for the entire time of the study.

Each fourth grade student showed reading improvement of at least one-half year in the twelve weeks. The highest gain was three years in oral and two years in oral comprehension and silent reading.

BIBLIOGRAPHY

- Bamico, Sandra and Watson, Kathryn. *Peer helping relationships*, Research Monograph No. 18, Gainesville, Florida: University of Florida, 1976.
- Cook, J. E. *The effect of neurological impress on reading disabled children with auditory perception impairments*. Miami: Annual Meeting of the College Reading Association, 1976. (ERIC Document Reproduction Service No. ED 128 781).
- Farr, Robert (Ed.). *Measurement and Evaluation of Reading*, New York: Harcourt, Brace and World, Inc., 1970.
- Fitz-Gibbon, Carol Taylor. The learning-tutoring cycle: an overview. UCLA. Sponsoring Agency: National Institute of Education, Washington, D. C. November 1977. (ERIC Nos. ED 148 804, 148 805, 148 806).
- Harris, A. J. and Sipay, E. R. *How to increase reading ability* (6th ed.). New York: McKay Co., Inc., 1975.
- Heckleman, R. G. A neurological impress method of remedial reading instruction. *Academic Therapy Quarterly*, Summer, 1969, 4, 277-282.
- Hollingsworth, P. M. An experience with the impress method of teaching reading. *Reading Teacher*, November, 1970, 24, 112-114, 187.
- Hollingsworth, P. M. An experimental approach to the impress method of reading attack in word recognition. *Reading Teacher*, March, 1978, 31, 624.
- Monteith, M. K. Taped books and reading material. *Journal of Reading*, March, 1978, 21, 554-557.
- Oliver, R. W. *A study of the neurological impress method as a technique of improving the reading achievement of an elementary and a secondary reader*. Unpublished masters project, University of Central Florida, 1979.
- Schneeberg, H. A. Listening while reading: a four year study. *Reading Teacher*, March, 1977, 30, 629-635.
- Stinner, Mary Catherine. *The use of the neurological impress method in accelerating reading levels in selected learning disabled children*. Unpublished master's project, University of Central Florida, 1979.
- Trela, Thaddeus M. *Fourteen remedial reading methods*. Belmont, California: Fearon Publishers, Inc., 1977.

TELECONFERENCING INSTRUCTION: A PILOT APPROACH

Larry Hudson, Steve Sorg, Barbara Keene

INTRODUCTION

The technology "bandwagon" is alive and well for distance instruction. Videodiscs, instructional television through public and low-power broadcasting, direct-broadcasting from satellites, Instructional Fixed Television Service (IFTS), computers, radio and even the telephone are being used for instruction to distant learners (Feasley, 1983). All avenues should be pursued but why not learn to effectively use what is inexpensive and commonplace — the telephone? The telephone, for most of us, has been around and accessible for all of our lives. We take the telephone for granted, and we forget that it can be a very useful tool for instruction and administration (Stewart & Duffy, 1979), (Brandt & Rzonca, 1980).

Teleconferencing, interactive audio, telenet or telephone instruction are, for the purposes of this paper, identical terms. Each of these terms describes uses of a telephone with amplifiers and microphones to talk with persons at two or more sites.

One cannot help but feel that Alexander Graham Bell thought that the telephone might someday be useful in personal communication among many persons at multiple sites. There were skeptics who did not feel the general public would be able to use the equipment.

"Bell expects that the individual home owners will use his instruments without the aid of trained operators. This is ridiculous, of course. Obviously the public cannot be trusted to handle technical communications equipment" (Parker, 1976, p. 1)

As far back as 1939, teleconferencing was used to present courses to homebound students. This early venture at the University of Iowa used an intercom system to reach over 1,000 students in just two years (Parker, 1980). Coincidentally one of the authors had an initial teleconference experience at the University of Iowa in the area of instruction for a curriculum development course presented through the Iowa dedicated telephone network of community colleges (Hudson & Bunting, 1982).

In 1965, the University of Wisconsin, Madison initiated a teleconference network. For nearly 20 years they have been presenting courses and programs using an audio teleconference system. Annual enrollment began at 190 and by 1978 reached over 33,000 students in both credit and non-credit continuing education programs (Parker, 1980)

Other teleconferencing systems have been developed for use in private colleges, public community colleges and universities. There are recognized state and national teleconference systems in Iowa, Illinois,

West Virginia, Nevada, Missouri, and Canada. Several private corporations also offer teleconferencing services.

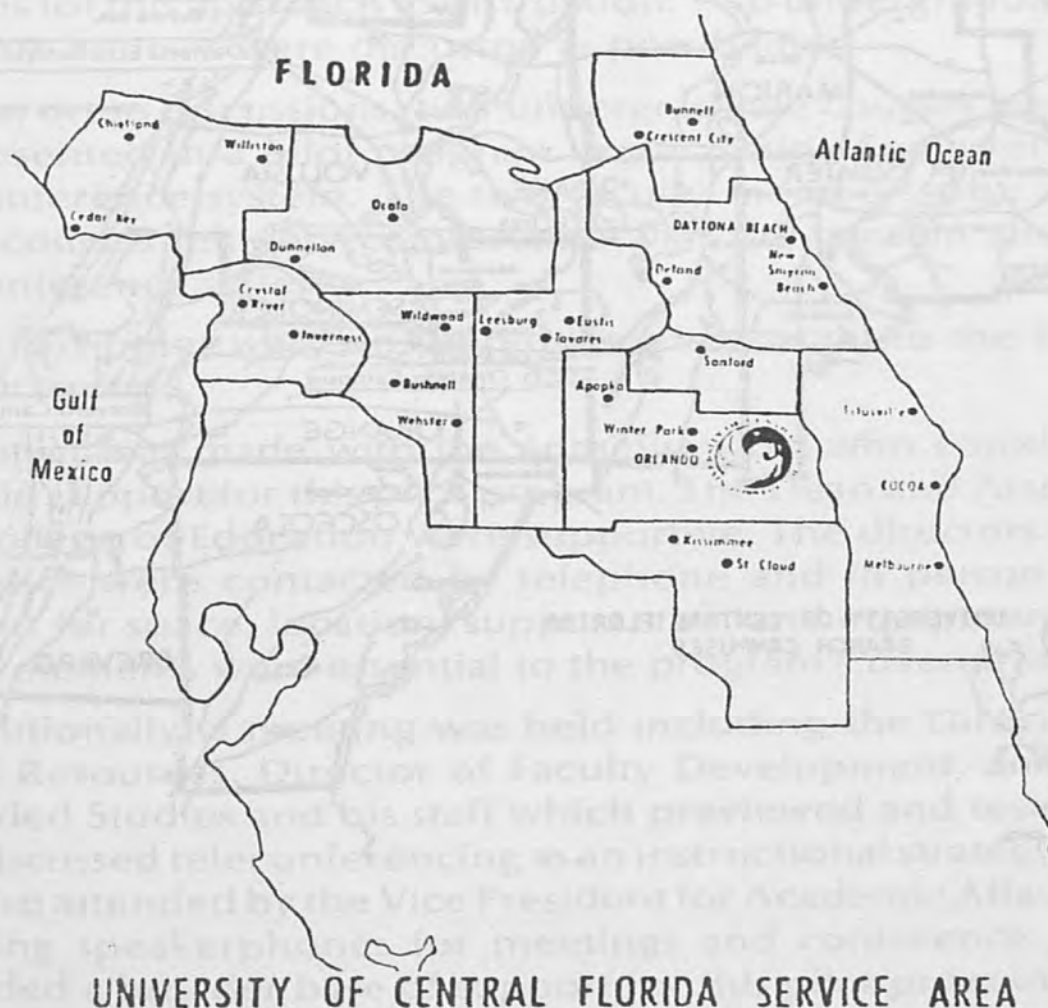
In the College of Education at the University of Central Florida, a pilot teleconferencing program was initiated in the spring semester 1984. Two Vocational Education undergraduate courses were presented using basic telephone amplifiers with microphones. The faculty were Dr. Steven Sorg for EVT 3815 "Management of the Vocational Classroom & Laboratory" and Dr. Larry Hudson for EVT 3311 "Preparation for Clinical Teaching in Vocational Education."

This article describes the planning, equipment, presentation techniques and proposed evaluation methods and future uses of this approach to distance instruction.

NEED

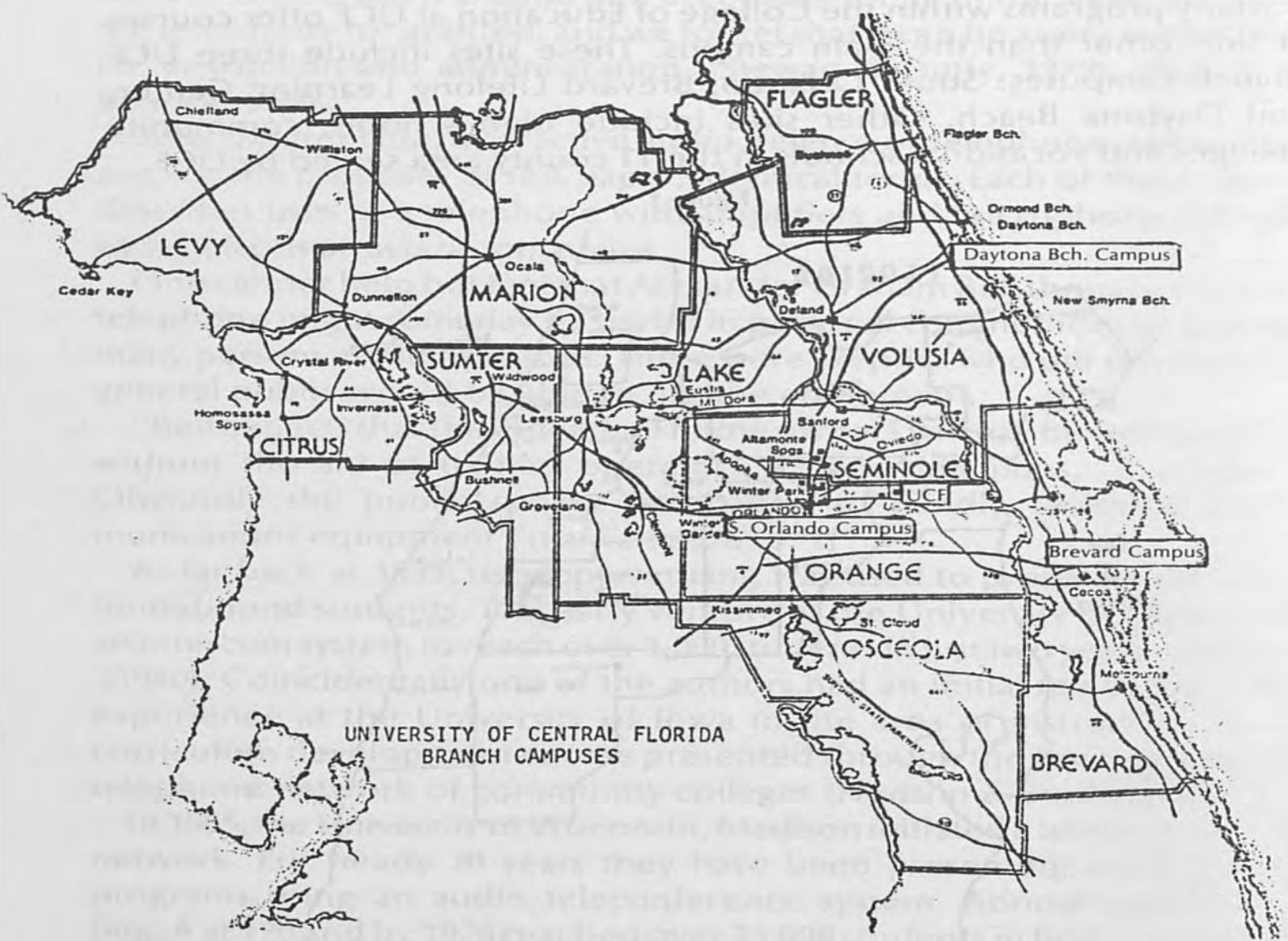
Many programs within the College of Education at UCF offer courses at sites other than the main campus. These sites include three UCF branch campuses: South Orlando, Brevard Lifelong Learning Center, and Daytona Beach. Other sites include high schools, community colleges and vocational schools in the 11 county area served by UCF.

Figure 1



The Vocational Education programs are only offered off-campus using the three UCF branch campuses and one area vocational-technical center. (Figure 2) At these sites courses for initial and continued vocational teacher certification and undergraduate degree programs are offered by faculty who commute from the main campus. The question of underserved areas needed to be addressed. Would people enroll and work on degrees if courses were more accessible?

FIGURE 2



In the trade & Industrial and Health Occupations vocational education programs, all courses were designed to be performance-based. These courses contain groups of research-identified teaching skills or competencies (Fardig, 1980). Students work at their own pace, within the university time constraints, to achieve required competencies.

Faculty in these vocational education programs have attempted to meet students' instructional needs in outlying areas by holding a weekly seminar session for each course offered at each branch campus or other site. This has been a very satisfactory plan for initial certification and undergraduate courses, but a lack of resources has permitted graduate courses to be available on a regular basis only at the South Orlando campus.

PLANNING

Discussions were held to determine which, if any, vocational education courses would lend themselves to a teleconference system. Courses that do not contain competencies requiring micro-teaching activities or the actual demonstration of media equipment usage were felt to be the best choices for this approach to instruction. Two undergraduate and several graduate courses were discussed as possibilities.

From these discussions, two undergraduate courses were selected to be presented in a pilot program in the Spring Semester 1984, using a teleconference system. The two faculty members who were to teach these courses felt very comfortable with the content and with using a teleconference system.

This last point was considered very important to the success of this pilot program.

Contact was made with the administrators who could approve and provide support for this pilot program. The Dean and Associate Dean in the College of Education were supportive. The directors of the branch campuses were contacted by telephone and in person to gain their support for space, location, support staff, and equipment preparation. These elements were essential to the program's overall success.

Additionally, a meeting was held including the Director of Instructional Resources, Director of Faculty Development, and the Dean of Extended Studies and his staff which previewed and tested equipment and discussed teleconferencing as an instructional strategy. This meeting was also attended by the Vice President for Academic Affairs, a supporter of using speakerphones for meetings and conference. This meeting provided a broader base of support for this pilot program.

report. It also allotted money for individual pictures and slides, duplicating, and printing. Aside from this grant, a graduate assistant also worked on library research and related correspondence about teleconferencing for approximately two hours per week.

A small (\$500.00) faculty development grant was awarded for course implementation. This provided support for a part time work study person to coordinate mailing, remind the center staffs of the teleconference, type any necessary correspondence, and compile a final

SERVING THE STUDENTS

A brochure advertising the courses was sent to a list of contact persons in vocational education within the UCF service area. A request was made for all prospective students to enroll in person at the South Orlando Campus on the first night of class. In this way, a general orientation could be provided to personalize the courses. Registrants for EVT 3815 included eight at the South Orlando Campus and one at the Daytona Beach Campus, while for EVT 3311, four registered at the South Orlando Campus, two at the Daytona Beach Campus, one at the Brevard Campus and one in Palatka. For the first course, then, two sites were used while four sites were used for the second course. Both courses were scheduled for the same evening to meet for a one hour seminar and provide "on-air" office time for student advising.

In this pilot program several students were being served who would not have had the opportunity during this semester or who would have been required to travel a greater distance to class in Orlando. In EVT 3815, for example, one student was enrolled at the Daytona Beach Campus; it would not have been fiscally practical to offer the course at that site for only one student. Because of prior faculty load planning, the two students in EVT 3311 at Daytona Beach would have been required to drive either to Orlando on Monday, or to the Brevard Campus on Wednesday, as that course was not scheduled in Daytona Beach. Neither they nor the one student in EVT 3815 at Daytona Beach, nor the one at the Brevard Campus for EVT 3311, would have been in a group for their seminar; an asset felt to be very important in performance-based vocational education.

The student in Palatka was a unique example. Restricted to bedrest because of a health condition, she was enrolled in a course required to continue her teacher certification. The student was actively involved in seminar discussions, with others at three different sites. Costs for the long distance telephone call were borne by the student and were much

less, compared to the cost in terms of time and gasoline to drive to Orlando, a distance of over 100 miles one way.

SITE SUPPORT

TELEPHONE SYSTEM

The University of Central Florida uses an internal computerized telephone system (ROLM). This system permits persons with certain extension numbers to add on additional parties for conference calls. As an illustration from our office four internal parties and two external parties can easily be connected. It does not permit call-in by parties to a central number however, as it is not a "bridge" system.

Initially the conference was set up using an office telephone but was switched to the UCF switchboard operator for two reasons. First, it was easier to add all sites to the conference and second, the audio quality appeared to be better. The UCF operator, along with the faculty and site staff, have a schedule with all telephone numbers to insure proper timing for each class and to prevent accidental disconnects.

EQUIPMENT

After a careful review of resources for equipment purchase and of the options the faculty presently knew of, a decision was made to purchase speakerphones; the Duophone by Radio Shack at a price under \$50.00 per unit. One unit was provided to each UCF branch campus. The two faculty had previously purchased a unit for their office that could be used at another location, if necessary.

This brand of equipment included a built in amplifier and microphone with an on-off control, volume level adjustment and privacy control. They were easily inserted in line to existing telephones and did not adversely affect the quality of telephone service.

Additional telephone extension cords, in-line couplers and multiple line adaptors were purchased as required, and provided to the campuses. The total cost for equipment was under \$350.00, thus operating on the proverbial "shoestring".

COURSE PRESENTATION

Each of the two pilot courses were scheduled for one hour per week for a seminar. In this seminar, brief informational presentations were

used along with discussions on specific competencies on which students were working. The instructor, or resource person in our programs, had the responsibility of answering questions, and providing the expertise to assist students in achieving the required competencies.

Active involvement has been suggested as an essential element for successful teleconferencing instruction (Monson, 1978), so small group activities were used that involved all students either on-air or on-site in problem solving and brainstorming. In these activities a time limit was placed on the group using the conference system and the entire group reconvened for discussion. This approach appeared to work quite well with the current combination of sites and number of students.

Also crucial to successful teleconferencing instruction is the paper component. In these courses, The Ohio State Performance-Based Teacher Education (PBTE) modules were used extensively. These modules contain readings, teacher feedback, simulations, practice, and a final performance of the required competency. In this manner students worked at their own rate and submitted assignments when ready. Progress checkdates were suggested, as motivation for course completion, within the University time schedule.

EVALUATION

Informal comments so far include suggestions for improvement and appreciation for providing the opportunity to attend class. Both a mid-term and end of term evaluations of instructional techniques and equipment effectiveness are planned. In addition, a description of costs and time saved per student will be qualified and suggestions for improvement compiled. A booklet of references and hints will also be compiled.

SUMMARY

Audio teleconferencing appears to be a neglected technique in our desire to use more sophisticated technology for both instruction and administrative purposes. Effective audio teleconferencing, using multiple sites was established with limited resources. Through planning and administrative support are necessary for successful instructional teleconferencing

Future plans include one undergraduate course to be offered this summer, with two more undergraduate and one graduate course in the Fall of 1984 using a teleconference approach.

BIBLIOGRAPHY

- Brandt, L. & Rzonca, C., (1980). Telenet: A New Approach to Old Problems. *Vocational Education.*, 55, 3.
- Fardig, G. (Ed.), (1980). Prospects of Performance-Based Vocational Education. *Proceedings of National Invitation Conference on Performance-Based Teacher Education*, Orlando, Florida.
- Feasley, C. (1983). *Serving Learners at a Distance: A Guide to Program Practices*. ASHS-ERIC Higher Education Research Report. Washington, D.C., Association for the Study of Higher Education.
- Hudson, L. & Bunting, D., (1982, August). The Telenetwork System: A Viable Alternative for Delivering Distant Instruction. *Educational Technology*, 17-19.
- Lewis, R., (1983). Meeting Learners Needs through Telecommunications: A Directory and Guide to Programs. American Association for Higher Education, Washington, D.C., (ED 227 746).
- Monson, M., (1978). *Bridging the Distance*. Madison, Wisconsin, University of Wisconsin Regents.
- Parker, L. & Monson, M., (1980). *More than Meets the Eye*. Madison, Wisconsin, Instructional Communications Systems. University of Wisconsin-Extension.
- Parker, L. & Riccomini, B., (1976). *The Status of the Telephone in Education*. *Second Annual International Communication Conference*, Madison, Wisconsin, University of Wisconsin-Extension Communications Program.
- Stewart, B. & Duffy, B., (1979, November). Telenetworking. *Community and Junior College Journal*, 21-23.

CULTURAL DIVERSITY: ISSUES AND CONCERNS FOR TEACHERS

Dr. Martha Lue Bell

It was the third grade, or second, or maybe even first I remember having to recite the inscription "Give me your tired, your poor, your huddled masses" . . . I remember having to recite that inscription with vigor and enthusiasm far beyond my tender years. The vigor was tempered by the mere fact that "huddled masses" and much of the terminology had little meaning to me. But that was the way it was done. . . in this North Florida town. Everyone learned the Gettysburg Address, the inscription on the Statue of Liberty, the Preamble to the Constitution—all important data. But interestingly enough, we learned it because we had to—because our teachers said so. No one readily took into account cultural diversities. I wonder if anyone really cared.

A CULTURALLY DIVERSE EDUCATOR

According to Chin & Kamp (1982), the term "culturally diverse" refers to those groups of individuals (minority groups) whose cultural background or primary language is different from that of their peers. Cartwright, Cartwright, & Ward (1981) have defined the term "minority" as used by the Federal Interagency Committee on Education (1975):

1. American Indian or Alaskan Native, or a person having origins in any of the original peoples of North America.
2. Asian or Pacific Islander, or a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Pacific Islands.
3. Black/Negro, or a person having origins in any of the black racial groups of Africa.
4. Hispanic, or a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture of origin, regardless of race. (p.272)

This paper seeks to address some important issues concerning one specific culturally diverse group - Blacks (Afro-Americans). Black students make up the largest minority of any group in our present public school system. Research (Hillard, 1980; Mercer, 1981) has consistently indicated that the Progress of Black students has often been impeded by:

- a) IQ tests normed on white, middle class students;
- b) feelings of poor self-concepts; and
- c) the insensitivity of those of the dominant culture to the needs of Black students. Monsink (1980) contends that in understanding the issue of cultural diversity, three major concerns readily come into account:
 - a) a child's language and culture may have a significant impact on his academic success;

- b) There must be an identification of curricular adaptations, educational technology, and materials necessary for instructing culturally diverse individuals,
- c) the problems of oppression and poverty significantly influence one's social, emotional, and physical well-being.

Some of the issues this paper addresses are: Cultural Awareness in teaching; preparation of professionals; and problems of black student attrition in higher education.

CULTURAL AWARENESS IN TEACHING

As cited by Rosenthal & Jacobsen (1968 in Atkinson & Sue's (1979) book on Counseling American Minorities) there are certain culturally relevant barriers that may inhibit effective counseling of Black students and also may inhibit effective teaching.

a. Student resistance — The student may be hostile, angry, and reject any approach by the teacher. There may be resistance to working of certain tasks for the day. The resistance may be in part due to something that is "going on inside" the student and not merely reflection of the students culture.

b. Student transference — Students may not want to work with a teacher who is different because of an unpleasant experience with different culture.

c. Teacher counter-transference — A teacher may have a pre-set judgment about culturally different students.

d. Language differences — The issue of standard English versus "Black English" remains a controversial one. Distinguishing between cognitive difficulties that are inherent and those that are culturally based is an important aspect in understanding language differences.

PREPARATION OF PROFESSIONALS

Preparing and educating competent professionals who will in turn provide culturally diverse children with skills necessary for them to be functional is an integral issue. But who will be these professionals — where will they acquire their training? For some time now there has been a thrust toward complete desegregation of public institutions of higher learning as evidenced by the Equal Rights Amendment and Title IX legislation. It is imperative that these institutions of higher learning evaluate themselves to determine if, indeed, every conceivable effort has been exhausted to bring about the desired result of equalizing educational opportunities for all citizens.

BLACK STUDENT ATTRITION IN HIGHER EDUCATION

Numerous research studies have been conducted to ascertain the "whys" behind the common problem of high black student attrition on

predominantly white campuses (Astin, 1977; Burrell, 1979). Through their individual research, similarities emerged:

- a. student-unpreparedness;
- b. covert/overt prejudice;
- c. isolationism.

All three were major reasons for black students not completing a baccalaureate degree.

Miller (1980) conducted research regarding factors related to the retention of selected Black undergraduate students at a central Florida university. Permission was granted from Burrell (1979) to use an instrument he designed to give insight into the perception of administrators and minority students on minority student experience at predominately white campuses.

The instrument was administered to seventy-one (71) selected black students who had been admitted to a local university from September, 1973 to September, 1978; who attended at least one term; who were in good standing; and to whom no degree was awarded. Results indicated that:

- a. Blacks still preferred traditional fields of education;
- b. there was lack of identity or self-esteem;
- c. greatest satisfaction was obtained from established friendship; and that the highest percentage (83%) indicated that their cultural needs were not met.

CONSIDERATIONS

The following is a list of suggestions that should be taken into account when working with culturally diverse individuals.

1. Being culturally different does not constitute a deficit. Further stated, "difference" does not connote "deprivation". As stated by Nguyen Tot Van in reviewing the book, *Language and Cultural Diversity in American Education* (Abrahams and Troike, 1968). . .the two concepts "difference" and "deprivation" approach ignores culture and language systems from which a teacher could gain much understanding, while reinforcing the self awareness and confidence of the student.

2. Among the proposals suggested by Fuchigami (1980) in the area of teacher preparation for culturally diverse individuals is the recommendation there should indeed be a commitment from institutions of higher learning in their teacher training programs concerning culturally diverse individuals.

3. As culturally diverse children are placed in classrooms, the teacher should make a concerted effort to become more informed about the individual's culture. The use of research projects on prominent Black

individuals, the utilization of positive role models from the community are but a few suggestions.

4. Taylor (1982) contends that prejudicial stereotyping occurs when the assumption is made that culturally diverse speakers are unable to use or switch to the standard language usage ("Standard English"). Textbooks and materials that present Black speakers in a stereotypical manner should be avoided. If such textbooks and materials are used, they should be followed by discussions and examples "how not to" rather than to allow the textbooks and materials to stand on their own merit.

5. Inservice training workshops should be conducted to assist teachers in working effectively with culturally diverse students.

6. Role playing is an excellent avenue in assisting students of the dominant culture in exploring their own feelings and becoming sensitive to the feelings of culturally diverse groups. An example of an effective role playing situation is adapted from the works of Wiig and Bray (1982):

"Ask the students to analyze and describe a given setting in which they were the minority. Have students to articulate their own feelings: what their actions were, how they coped, and what they learned from that experience."(p. 120)

7. Lastly, the culturally diverse individual's use of Standard English cannot be overemphasized; however, it should be noted that this topic does indeed remain a highly controversial issue (Taylor, 1982; Williams, 1972). The teacher can assist in this growth process in several ways: (a) avoid imitating the speech patterns of culturally diverse speakers but firmly establish the correct models of grammar to be used in classroom and formal settings. Rachel Jones (1982) expressed it best when she reaffirmed the hope of one day seeing more culturally diverse (Black) individuals "less dependent on a dialect that excludes them from full participation in the world we live in". The issue, according to Jones (1982) is not whether one speaks "white" English, but rather whether "right" or standard English is spoken. The issues remain complex and will be continually a source of discussion for many years. Issues of preservation of culture, and the vitality and richness of one's own native language are but a few of the present topics of much discussion.

BIBLIOGRAPHY

- Abrahams, R. & Troike, R. (Ed). *Language & Cultural Diversity in American Education*. New York: Wadsworth Publishing Co., 1968.
- Astin, A.H. *Four Critical Years*. San Francisco, CA: Jossey-Bass, Publishers, 1977.
- Burrell, L.P. *Monograph: Perception of Administrators and Minority Student Experiences on Predominantly White Campuses*. Barre, UT: Northlight Studio Press, 1979.
- Cartwright, G., Cartwright, C. & Ward, M. *Educating Special Learners*. 198., Wadsworth, Inc.
- Chinn, P.C. & Kamp, S.H. *Cultural Diversity and Exceptionality in Exceptional Children and Youth*. 3rd edition, N.G. Haring, Ed. Columbus: Charles H. Merrill, 1982.
- Fuchigami, R.Y. Teacher education for culturally diverse exceptional children. *Exceptional Children*, 1980, 46, 636-641.
- Hillard, A.G. Cultural diversity and special education. *Exceptional Children*, 1980, 46, 584-588.
- Jones, R. What's wrong with Black English in Newsweek. December 27, 1980, p.7.
- Mercer, M. Reassessing the large number of black children in special education classes: a challenge for the 80's. *The Negro Educational Review*, January, 1981, 33 (1), 28-33.
- Miller, G. *A study of the factors related to the retention level of selected black undergraduate students at the University of Central Florida*. Unpublished manuscript. University of Central Florida, 1980.
- Morsink, C. Educating culturally diverse exceptional children: Issues and Practices. *Conference Proceedings*. November 21, 1980. Dean's Grant Project, University of Kentucky, Lexington, Kentucky.
- Rosenthal & Jacobsen (1968). Pygmalion in the classroom: Teacher expectations & pupil intellectual development. In Atkinson & Sue (Ed.): *Counseling American Minorities: A Cross-Cultural Perspective*. Dubuque: William C. Brown Co., 1979.
- Taylor, O. Language Differences. In Shames, G. & Wiig, E. *Human Communication Disorders: An Introduction*. Columbus: Charles E. Merrill Publishing Company, 1982.
- Van, Nguyen Tot. *Book Analysis of Language & Cultural Diversity in American Education*. Unpublished manuscript, University of Central Florida, December, 1983.
- Wigg, E.H. & Bray, C. *An Instructor's Guide to Human Communication Disorders: An Introduction*. Columbus: Charles E. Merrill Publishing Company, 1982.
- Williams, R. *Black Intelligence Test of Cultural Homogeneity*, 1972.

Perspectives On Homosexuality

Roberta L. Marowitz

Perspectives on homosexuality are as diverse as the numerous proponents of each. Church leaders view homosexuals as sinners; the law, as criminals. Clinicians and mental health professionals, until recently, have labeled homosexuality as pathological, an illness in need of treatment, an ailment which can be corrected. It was only in 1973 that homosexuality was removed from the American Psychiatric Association's list of mental disorders, and even then it was categorized both as a "deviant" lifestyle and an "alternative sexual pattern" — the diagnosis of which rests with the clinician.

Researchers even have difficulty agreeing upon what is meant by the term "homosexuality." For instance, are we referring to same-sex feelings? or attractions? preference? behavior? lifestyle?

The purpose of this paper is not to draw arbitrary lines between what homosexuality encompasses and what it does not, but to review the literature as it exists and examine some of the findings, offer a wide range of considerations, examine applicable counseling implications, and conclusions.

EARLY DAYS: THE MEDICAL MODEL

The bulk of early research and commentary is dominated by the medical model's contention that homosexuality is a pathological condition. Bergler (1959) insisted that "all homosexuals tended toward guilt, depression, extreme jealousy, and an irrational belief that homosexual feelings are found in all men." Other clinicians pointed to familial characteristics that contributed to this "maladaptation." For instance, the typical family background included a "close-binding, overprotective mother, and a detached, absent or openly hostile father" which inhibited the natural expression of heterosexual feelings (Bieber et. al., 1962). Hatterer (Hatterer, 1970; and Hatterer and Tripp, 1971) contended that homosexuals feared rejection of the opposite sex and feared the competition involved in securing a heterosexual mate.

Sigmund Freud's theoretical contention was that homosexuality resulted from "arrested development" at any one of the stages of psychosexual development (Marmor, 1970).

The medical model, although historically prevalent, is very much under attack at this time and has been for quite awhile. Despite the dispute over the possibility of biological determinants of homosexuality, research has shown that male and female homosexuals do not have hormonal levels that are any different from matched controls. Additionally, in cases where hormonal injections of estrogen or testosterone have been used in the treatment of persons wishing to assume a

heterosexual orientation, homosexual orientation appears to remain intact (Money and Dalery, 1977). Other theories which propose that homosexual tendencies are inherited and that abnormal androgen and estrogen ratios exist among gays are not corroborated in subsequent research (Coleman, 1978).

Most, if not all, of the researchers that view homosexuality as pathological have used patients requesting treatment as their research subjects. Surely for these persons, homosexual attractions presented stressful, difficult adjustment problems. Indeed, if one examines fifteen unhappy homosexuals and concludes that "100% of the homosexuals in this study were unhappy and maladjusted," the bias is evident.

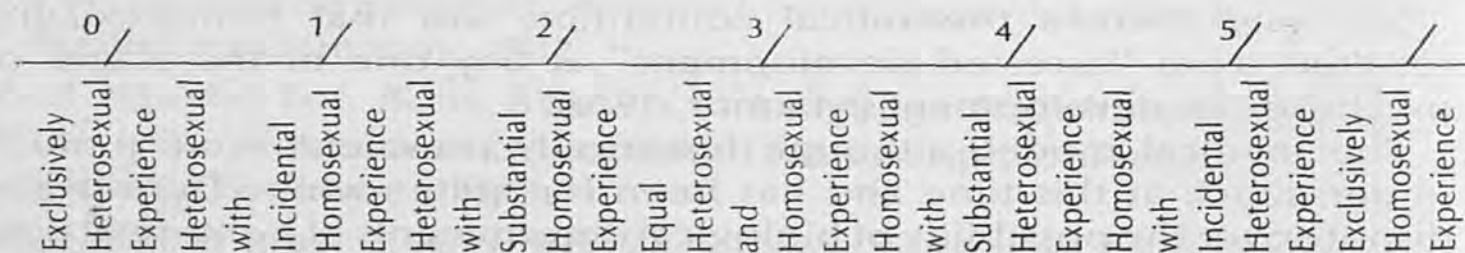
CURRENT PERSPECTIVES

Numerous studies have demonstrated that "extremely close, personally satisfying" gay relationships exist (Peplau et. al., 1978) and no more evidence of personal maladjustment exists among homosexuals than would be expected in a controlled sample of heterosexuals (Coleman, 1978). Such research allows us to take a discriminating look at alternatives to the medical model.

Evelyn Hooker (1965, 1967) was an early proponent of the Normal Variant model of homosexuality. Citing the bias involved in selecting subjects from psychiatric hospitals, Hooker turned her attention to homosexuals in the community and found that "in terms of psychological health, homosexuals and heterosexuals are indistinguishable."

June Hopkins (1969) controlled for age, education, and intelligence, and administered a battery of tests to groups of homosexual and heterosexual women. Her findings concurred with Hooker's: the two groups were "equally healthy psychologically."

Hooker's and Hopkin's studies assume that homosexuals and heterosexuals fall into exclusive categories, and while there are persons who would categorize themselves as "one or the other," Kinsey et. al. (1948, 1953) remind us that sexuality may be considered on a continuum of orientations. The model they propose follows:



Note that this continuum is not unlike what would be expected if sexuality were illustrated via the "normal curve." Such a perspective opens doors to the possibility that homosexuality may indeed be a normal variant or simply, an alternative lifestyle.

ALTERNATIVE LIFESTYLE

The following excerpt from *Our Bodies, Ourselves* illustrates how an individual (specifically a woman in this case) with homosexual feelings may become “maladjusted” and unhappy with her lifestyle:

Lesbianism is not a physical characteristic, unlike the quality of being black or being a woman. So most of us have the choice either to be invisible, by passing as straight, or to be open. If we decide to be openly gay, we often become vulnerable to physical and psychological harassment. We're labeled sick, sometimes kept away from kids, maybe fired from our jobs. If we keep our gayness hidden, we are constantly subjected to the insults and embarrassment of being assumed to be heterosexual: gynecologists want us to use birth control, friends want to “set us up” with boys, men make passes at us. Most important, our lives become filled with fear that others will find out. (p. 87)

Despite the fact that it is difficult to be gay in our society, openly gay people comprise ten percent of the population (Kimmel, 1978). This figure indicates a significant number of individuals who have adopted such a lifestyle and lends credence to the school of thought that supports homosexuality as an alternative lifestyle.

“COMING OUT”

How does one go about recognizing themselves as gay? At what point does one label themselves gay? What factors affect a person's choice to live a heterosexual lifestyle despite homosexual attractions?

For some, choosing homosexuality is a political decision; for others, a social decision. Still others remain uncertain about the nature of this choice.

DeMonteflores and Schultz (1978) became interested in the process through which gay people recognize their sexual preference and choose to integrate this knowledge into their personal and social lives. This process, commonly referred to as “coming out” involves a number of critical experiences that progress step-wise from private perceptions to public acknowledgement.

These critical experiences include becoming aware of same-sex attractions, having one's first experience with a member of the same sex, coming out publicly. Not all who experience same-sex attractions will act on those feelings. Similarly, not all who do have an initial experience will proceed along the continuum. At any point an individual, for a countless number of reasons, may choose not to go any further in the coming out process.

DEVELOPMENTAL PERSPECTIVES

The central task of adolescence, according to Erikson in *Integration*

which involves assuming an adult sexuality, integrating this sexuality into one's personality, and in turn fitting into society with its norms and values. Likewise, these are the developmental tasks of "coming out".

DeMonteflores' and Schultz examine four psychological components involved in the successful resolution of this task for homosexuals. Identity formation involves cognitive transformation (learning to think differently about being gay, challenging society's negative stereotypes), recasting the past (accepting earlier homosexual attractions and letting go of anguish surrounding those attractions), and finally, self-labeling. The second component, self-disclosure, involves making one's public self-congruent with one's private self and indicates a choice between societal acceptance and personal authenticity. Self validation is the process by which one increases his/her self worth by looking to others (often the gay community at this point) for affirmation. And fourthly, sex role socialization refers to one acquiring validation from the community at large.

In light of this, DeMonteflores and Schultz remark that "one may not choose to be homosexual, but one may choose to be gay" indicating an interesting distinction between innate attractions and the process by which those attractions are accepted and incorporated into one's lifestyle.

Kimmel (1978) applied Levenson's developmental periods as outlined in *Seasons of a Man's Life* to existing data on gays in an effort to provide a model for understanding gay adult development. He learned that the adult development of the homosexual population is quite similar to that of the heterosexual population.

Because "lesbian and gay male adolescents may experience a profound conflict" in the developmental period of late adolescence and early adulthood, this is a significantly crucial time for them. "Homosexuals are likely to feel guilt, anxiety, or conflicts about their sexual orientation in addition to whatever reactions they may have to their sexuality per se." Kimmel suggests that the successful resolve of this difficult period may provide a "crisis competence that buffers the person against later crises." He also noted that during this period men and women differed in their perceptions of how they acquired their sexual orientation. Men reported feeling that their sexuality involved little choice on their part, while women reported a stronger sense of personal choice regarding their sexual orientation.

GAYS AS ROLE MODELS

Studies concerned with the acquisition of sex-role behaviors among children having significant contact with gays have concurred that gays are more likely to serve as non-traditional sex-role models than as determiners of same-sex preference (Riddle, 1978; Hoeffler, 1981; Kirkpatrick et. al., 1981). Societal fears that lesbian mothers will auto-

matically rear homosexual children are not borne out in the research. Rather, while children tend to internalize particular traits from a variety of models, sexual preference appears to evolve somewhat independently.

Hoeffler compared samples of homosexual and heterosexual mothers and their children, expecting to find marked differences between the styles of child rearing and the children's sex-role behaviors. Her most striking finding was the similarity that became apparent in these two areas. Although both sets of mothers preferred and encouraged their children to play with a wide range of toys in the Block Toy Preference Test, boys tended to select "masculine" toys and girls tended to select "neutral" rather than "feminine" toys. Hoeffler hypothesizes that this effect reflects Bandura's model of social learning (e.g. peers, TV, nursery school and their effect of sex-role behaviors) and reminds us of the many factors which influence our sexual preference.

COUNSELING IMPLICATIONS

Gartrell (1978) noted that "as American psychiatry has begun to move away from the 'illness' model of homosexuality, many psychiatrists are finding that they lack sufficient training in understanding homosexuality as a viable alternative lifestyle." Other research has supported this view and expanded the range of helping professionals to include not only psychiatrists but all who enter into therapeutic relationships with homosexuals.

Demonstrative of this need, Garfinkle and Morin's study (1978) indicated that "attributions of psychological health were found to differ as a function of sexual orientation of the client." Homosexuals, not surprisingly, were perceived as being less healthy. Other research reminds us of the negative traits that may be attributed to person's believed to be gay (Karr, 1978).

Winklepleck and Westfield (1981) propose a wide range of issues facing homosexuals as a result of their choice of a socially unacceptable lifestyle. Discrimination and prejudice, lack of social support and lack of family acceptance were cited as examples. Counseling needs of gays include the development of self-esteem and pride, as well as increasing communication skills and maintaining a meaningful and productive life. Students of counseling must note that these issues and needs are characteristic of all persons, regardless of their sexual preference.

Loving Someone Gay (1977) is perhaps the most comprehensive, helpful piece of literature available to counselors. Written by Don Clark, a gay psychotherapist, it provides an accurate portrait of the gay subculture, numerous case studies, and a wealth of resources. Clark advocates the following basic ground rules for counselors: be in touch with personal feelings about homosexuality and don't feign acceptance

of the lifestyle — refer the person elsewhere if need be.

It almost goes without saying that these ground rules are not limited to counseling relationships with members of this alternative lifestyle.

SUMMARY THOUGHTS

The concept of homosexuality is as complex as that of heterosexuality, and realized what a dangerous thing it can be to develop a particular theory and then assume all homosexuals fit into it. Not only can this promote erroneous conclusions, contradictory research, and overall confusion, many unique women and men risk being overlooked somewhere along the way as well. The research becomes rather arbitrary when the intent is to label and understand homosexuality “once and for all”.

No doubt the origins of homosexuality will be debated for years to come. I suspect we already know what we need to know: the origins of homosexuality resist definition, and there is virtually no inherent difference between homosexuals and heterosexuals save for their choice of partner.

Like all minority groups existent in today’s predominantly white, uppermiddle class, male-dominated, heterosexual society, gays are currently experiencing oppression and discrimination.

Being gay is inherently concerned with the tension between the individual and society, between conformity to the established norms and values that stabilize society and the variation that challenges the norms and produces social change. Psychology, by focusing on socialization, has long emphasized social stability and has tended to neglect social change (DeMonteflores and Schultz, 1978).

If society is ever going to abandon its stereotypical perspectives regarding homosexuality, then gays do need to continue to be visible and vocal about their subculture, reminding us that for every theory and explanation, there are numerous and significant exceptions. Future researchers may do well to examine sociological implications of homosexuality, and concentrate on the re-education of American society. Hopefully, the alternative lifestyle will one day merit respectful acceptance.

BIBLIOGRAPHY

- Bergler, E. *1000 Homosexuals*. Patterson, New Jersey: Pagent Press, 1959.
- Bieber, I. et.al. Homosexuality: A psychoanalytic study. In: Kelly, G.F. *Sexuality: The Human Perspective*. Woodbury/New York: Barron's Educational Series Inc., 1980.
- Clark, D. *Loving Someone Gay*. Millbrae, California: Celestial Arts, 1977.
- Coleman, J.C. *Abnormal Psychology and Modern Life*. Glenview, Illinois: Scott, Foresman, and Co., 1978.
- deMonteflores, C. and Schultz, S.J. Coming out: Similarities and differences for lesbians and gay men. *Journal of Social Issues*, 1978, 34(3), 59-72.
- Garfinkle, E.M. and Morin, S.F. Psychologist's attitudes toward homosexual psychotherapy clients. *Journal of Social Issues*, 1978, 34(3), 101-111.
- Gartrell, N. The lesbian as a "single" female. *American Journal of Psychotherapy*, 1981, 35(4), 502-509.
- Hatterer, L. Changing homosexuality in the male. In: Kelly, G.F. *Sexuality: The Human Perspective*. Woodbury/New York: Barron's Educational Series, Inc., 1980.
- Hoeffler, B. Children's acquisition of sex-role behaviors in lesbian mother families. *American Journal of Orthopsychiatry*, 1981, 51(3), 536-544.
- Hooker, E. *Male homosexuals and their worlds, 1965*. In: Kelly, G.F. *Sexuality: The Human Perspective*. Woodbury/New York: Barron's Educational Series, Inc., 1980.
- —The homosexual community, 1967. In: Kelly, G.F. *Sexuality: The Human Perspective*. Woodbury/New York: Barron's Educational Series, Inc., 1980.
- Hopkins, J. Lesbian personality, 1969. In: Kelly, G.F. *Sexuality: The Human Experience*. Woodbury/New York: Barron's Educational Series, Inc., 1980.
- Karr, R.G. Homosexual labeling and the male role. *Journal of Social Issues*, 1978, 34(3), 74-83.
- Kimmel, D.C. Adult development and aging: A gay perspective. *Journal of Social Issues*, 1978, 34(3), 113-130.
- Kinsey, A.C. Pomeroy, W.B. and Martin, C.E. *Sexual Behavior in the Human Male*. Philadelphia: W.B. Saunders, 1948.
- Kinsey, A.C. Pomeroy, W.B. Martin, C.E. and Gebhard, P.H. *Sexual*

Behavior in the Human Female. Philadelphia: W.B. Saunders, 1953.

Kirkpatrick, M. Smith, C. and Roy, R. Lesbian mothers and their children: A comparative survey. *American Journal of Orthopsychiatry*, 1981, 51(3), 545-551.

Marmor, J. Homosexuality and sexuality. In: Kelly, G.F. *Sexuality: The Human Perspective*. Woodbury/New York: Barron's Educational Series, Inc., 1980.

Money, J. and Dalery, J. Sexual disorders: Hormonal and drug therapy. In: Money, J. and Musaph, H. (eds.) *Handbook of Sociology*. New York: Excerpta Medica, 1977, 1303-1310.

Peplau, L.A., Cochran, S., Rook, K., and Padesky, C. Loving women: Attachment and autonomy in lesbian relationships. *Journal of Social Issues*, 1978, 34(3), 7-27.

Riddle, D.1. Relating to children: Gays as role models. *Journal of Social Issues*, 1978. 34(3), 38-58.

Winklepleck, J.M. and Westfield, J.S. Counseling considerations with gay couples. *American Personnel and Guidance Journal*, 1981, 60(1), 294-296.

Raising the IQ (Interest Quotient) in English Classes for Gifted Junior High Students

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What constitutes a successful English program for gifted junior high students? When a program is assigned the brightest kids in school, has full support of the parents and administration, and a teacher who would probably walk through fire to have the job, it would seem that success is a foregone conclusion.

Even with all of these factors in operation, the junior high English program for the gifted may not be successful and in fact may differ little from the regular English Typical junior high gifted English programs tend to follow one of two basic philosophies regarding education of the gifted. They will either attempt to accelerate the students so that they have completed work required in the twelfth grade by the end of ninth, giving them a bleak outlook for the high school years unless superb articulation arrangements are in place, or the programs will be designed to broaden (the key word is "enrich") their experience. To achieve this end, students will pursue a relentless routine of field trips, guest speakers, museum tours, and often additional assignments which demand more, although not necessarily different work. Sometimes gifted programs are best described by the unusual or "creative" activities in which the students engage. A very real problem here is that frequently these activities are chosen on the basis of their motivational power and content is not emphasized. As Joseph Renzulli (1973) noted.

"In conducting evaluative studies, I have witnessed far too many programs for the gifted that are essentially fun-and-games activities; such activities lack continuity and show little evidence of developing in a systematic fashion the mental processes that led these children to be identified as gifted." (p.126)

While the choice of a vertical (acceleration) or horizontal (enrichment) approach to structuring the gifted junior high English class may be entirely appropriate for given individuals within the group, there is a third dimension that will neither force students into content beyond their maturational level as accelerated approaches sometimes do, nor depend on the availability of the "enriching experience." The missing dimension is depth. Having mastered the required skills of the curriculum, gifted junior high students will benefit from experiences which do not necessitate adding content, but looking at the content in new ways. How is this achieved? The answer to designing an appropriate high interest English program for gifted junior high students lies in a basic understanding of the goals of gifted education and recognition of

teaching methodologies which are most likely to achieve these goals.

Although the term “basic” is infrequently applied to education of the gifted, certain guidelines are stated repeatedly in the literature and would seem to constitute a fundamental or basic approach to the task of educating the identified gifted student. Programs for gifted students are seldom presented as lists of content to be mastered, but instead are described in terms of cognitive skills to be fostered and developed. Characteristically a program for gifted students would incorporate the following:

- a) Strategies designed to promote higher order thinking (analysis, synthesis, evaluation). These would include inquiry, techniques of convergent and divergent thinking, and skills of critical thinking.
- b) Opportunities to explore creativity through stimulation of fluency, flexibility, originality, and elaboration.

A little acknowledged fact about English teaching is that it is process as well as content oriented. The study of grammar is essentially a study of the processes through which the language operates to convey meaning. The study of literature focuses on literary processes beautifully arranged to portray insights into the human condition. As for writing, Donald Murray (1968) has said it best:

“the climate of the writing workshop must encourage individual students to bring their own content to the course. During the class the students should not be passive receivers of information. They must be doers, writing and rewriting — discovering what they have to say, discovering what they need to know to say it effectively — until the students complete the act of writing by reading a reader who understands what they have written.”
(p.103)

For the gifted students, the processes are all important for these are the activities which will demand the fullest extension of critical thinking skills. Old content delivered in old ways will not stimulate the gifted student to engage in the essential processes of higher order thinking and creativity described above.

A process, however, does not function without content. James Gallagher (1979) pointed out that:

“Relatively little attention has been paid to the actual content that would make up the heart of a differentiated program, regardless of the particular learning environment (horizontal or vertical) in which it was delivered.” (p. 32)

It is apparent, then, that while the desired goals of gifted education are those which develop students’ abilities to engage in higher order

thinking processes, for the English program these can best be achieved by providing in depth experience in the content. The teacher's job is to structure content-process interaction in such a way that the cognitive skill development is the inevitable outcome. The remainder of this article describes some such interactions in the three major areas of the English curriculum, literature, writing, and language, which the authors believe will develop the cognitive skills of gifted junior high school students.

LITERATURE

An area of English instruction which naturally comprises a significant part of instruction in a gifted program is literature. According to Daniel Keating, (1979),

“In literature there exists no obvious linear progression of learning, therefore, expanding the scope of material horizontally makes good educational sense if it is done well.”(p. 191)

In selecting from the abundance of literature available for study, the teacher should be guided by the work's literary merit, the interest it will hold for the students, and the possibilities it offers for literary study. Once works have been chosen, some suggested activities for literary study might include:

- 1) Development of a story board to study plot development in a short story. This graphic laying out of selected scenes and script in effect produces a plot outline.
- 2) Having students keep a character analysis journal in which they record such data as: a) first impressions of the character; b) the character's role in the plot; c) a section copied from the work which shows what someone else thinks about this character; d) a selection copied from the work in which the character's emotions are clearly revealed and e) a selection of the character's own speech which reveals his development. Once sufficient data are acquired the teacher may direct writing, speech, or drama activities based on the information collected enabling the student to understand characterization development in a story.
- 3) Theme analysis. One of the most difficult aspects of literature study for junior high students — even the gifted — is recognizing a theme. In his book *Writing Without Teachers*, Peter Elbow (1973) describes a summarizing technique designed to provide a writer with a sense of his work's “center of gravity” (p.98). A modification of this procedure applied to a literary work can lead students through theme analysis. The procedure might involve a class or small groups of readers:
 - a) Have students brainstorm the main points of a story. Take one-two minutes for this activity.

- b) Summarize these points in a single sentence.
 - c) Select one word, which is found in the work, that best summarizes it.
 - d) Choose a word that isn't in the work to summarize it.
 - e) Using all of this information to think about the work, write a sentence which says what the story is about.
- 4) Determining the relationship of literature to one's life. An excellent resource is *Books I Read When I Was Young*. After examining this, a junior high gifted class might enjoy replicating this procedure within their local community by asking civic leaders, teachers, etc. to respond to the question posed by the NCTE Commission of Literature in the original work, "What are three books or authors who have influenced your life?" The audience polled should be selected by surveying students within the school to determine what local figures in government, religion, entertainment, media, and education are recognized by members of the student body. The resulting collection of letters could, of course, result in a publication.

WRITING

Students in junior high gifted programs are usually required to write more than students in regular classes. Unfortunately, there may be little differences in the type of assignments that are teacher designed and emphasize either "creative writing" (fiction or poetry) or library research. With a growing body of research on the relationship between writing and thinking, it seems obvious that writing programs for gifted students must meet certain needs that may not have been met in the writing traditionally assigned. Some suggestions:

- 1) Widen data bases for writing. Gifted students should learn techniques of data collection which involve questionnaires, surveys, personal interviews, and observation. Some of these should result in numerical data. Many gifted students are extremely talented in math and science, but receive little instruction on how to present numerical data in a written text such as a statistical report.
- 2) Question-asking as a technique of pre-writing is a crucial skill for gifted students because it requires divergent thinking for exploration of the content. The teacher may aid students in formulating questions through brainstorming activities or may provide a useful structure such as William F. Irmscher's (1972) modification of Kenneth Burke's approach through the "drama of thinking," (pp. 28-35). The Irmscher/Burke model requires the writer to

consider the topic as a dramatic event and to consider it by seeking answers to questions in the following categories:

ACTION

What happened?

What is happening?

What will happen?

What is it?

ACTOR-AGENT

Who did it?

Who is doing it? What did it?

What kind of agent is it?

SCENE

Where did it happen?

Where is it happening?

When did it happen?

What is the background?

MEANS

How did he do it?

What means were used?

PURPOSE

Why?

- 3) Finally students should be led through the processes of revision which will help them to evaluate their own writing styles and recognize the characteristics of the style. Such activities might include having students examine their rough drafts for sentence length. A quickly constructed bar graph will determine if the student has fallen into a potentially monotonous pattern. Set up exercises which will help the student to analyze the impact on his writing of varied sentence beginnings, recurrent types of modifying structures, or repetitious sentence structures. A list of all verbs will reveal over-use, voice, and strength. As Murray (1968) has said, the content of the writing belongs to the student. It is, however, the teacher's responsibility to teach content analysis.

LANGUAGE

The area of the English curriculum which has been least subject to the development of innovative teaching methodology is the study of language. In Junior high school the teaching of grammar constitutes the major portion of language study, and the methodology is primarily analytic. What junior high student has not despaired of yet another assignment in which he/she is directed to put "one line

under the noun, two lines under the verb, etc'' . Gifted students are capable of mastering this type of recognition exercise very readily. Unfortunately, like their peers in other classes, they are rarely challenged to go beyond this name—calling approach to grammar and examine the underlying operations of the language itself. Some examples of techniques which may stimulate gifted junior high students to a new interest in language study include:

- 1) Relating the noun, which is often the first topic in a junior high grammar review, to a study of onomastics — the noun is, after all, the central naming device of the language. Examine the overall importance of names. Include the categorical study of proper names, names of cars, names of rock groups, or names that are highly regulated like those of purebred dogs. Popular psychological journals provide articles on the effect of certain given names on personality and self-concept. In addition to searching out information on the topic, students may survey peers to determine preferential names and school records such as the yearbook to determine local popularity of given names. This approach could also involve studying place names, scientific names, and the linguistic history of selected names.
- 2) Studying grammar as a major component of the content of English. For example, as content, grammar should provide data for writing and speech activities. After studying adjectives students might be assigned a paper on the importance of adjectives to the language. Students might be asked to review their last three compositions describe their own uses of adjectives, or to select a passage from a favorite literary work and discuss the author's use of adjectives. Recognition of parts of speech, modifiers, and sentence structure is relatively easy for gifted students, thinking about their importance will provide a challenge.
- 3) The study of semantics to provide gifted students with the opportunity to engage in higher level thinking skills. This might be tied to a study of political language, bureaucratic language, legal language, sexist language, or even the probably overworked language of advertising. In any event, the study of language power in connection with language recognition provides both interest and depth.

Finally one teaching tool that can be used in all areas of English instruction to enhance gifted students' study of language is the computer. While the microcomputer is rapidly becoming standard equipment in many gifted junior high programs, its utilization in the language arts area has remained at the fun-and-games level.

Although possibilities for teaching are dependent upon the capability of the hardware available, teachers of English programs for the gifted should investigate the possibilities of word processing programs, creative writing programs, vocabulary development software, and grammar review software.

Educators involved in programs for education of the gifted are fond of justifying the existence of such programs by pointing out that these students constitute a major national resource. The gifted thirteen-year-old of today is the scientist, scholar or novelist of tomorrow. Whatever roles these students eventually play in society, during their junior high years their English educators must recognize the need for solid, content based, process oriented programs which not only teach the language but stimulate their interest in being life-long language learners.

BIBLIOGRAPHY

Bernice Cullinan and M. Jerry Weiss, editors, *Books I Read When I Was Young: Favorite Books of Famous People* (New York: Avon Books, 1980).

Peter Elbow, *Writing Without Teachers* (New York: Oxford University Press, 1973).

James Gallagher, "Issues in Education of Gifted," in *The Gifted and the Talented: Their Education and Development*, Seventy-eighth Year-book of the National Society for the Study of Education, Part I, edited by Harry Passow, (Chicago: University of Chicago Press, 1979).

William F. Irmischer, *The Holt Guide to English* (New York: Holt, Rinehart and Winston, Inc., 1972).

Daniel Keating "Secondary School Programs," in *The Gifted and Talented: Their Education and Development*, Seventy-eighth Year-book of the National Society for the Study of Education, Part I, edited by Harry Passow, (Chicago: University of Chicago Press, 1979).

Donal Murray, *A Writer Teaches Writing* (New York: Houghton Mifflin Company, 1968).

Joseph Renzulli, *New Directions in Creativity* (New York: Harper and Row, 1973).

TOWARD A PHYSIOLOGICALLY BASED THEORY OF LEARNING: SOME IMPLICATIONS

William Esler

Teachers, school administrators, and curriculum writers have long looked to learning theory as the capstan upon which to fasten the lines of rationale which they have used to make educational decisions. In the eighteenth and nineteenth centuries learning processes were thought to be based largely upon various philosophies which frequently possessed strong overtones of religious conviction.

Because of the doctrine of mental discipline, or faculty psychology, students, during the 1800's were assigned subjects such as geometry and Latin because they possessed logical structure. It was believed that in assimilating these disciplines the students would "train their minds" to think logically. Concurrent to the widespread faith in faculty psychology there existed several other popular theories. "Learning through unfoldment," advocated by such educational luminaries as Frederick Froebel and Jean Rousseau, proposed children would develop into well adjusted and productive adults if their environments were properly structured - like garden plants well watered and cultivated they would grow and bloom. John Locke and Johann Herbart believed that learning must be based upon sensory input.

PHYSIOLOGICALLY BASED THEORY OF LEARNING

This was the appreciation theory. In the nineteenth century Williams James popularized the "stream of consciousness" theory that emphasized building the learner's repertoire of skills and experiences such as analyzing, sorting, cataloging, sight, sounds, tastes, and smells. Each of these precursors of learning theory though based upon prescientific structures had a number of advocates at various times in history. And even in today's arena of behaviorally based learning theory, each still possesses some credibility among educators.

Empirically based learning theory was brought to life when Wilhelm Wundt in 1879 applied experimental methods to the study of psychology. The science of psychology quickly branched off into two main streams of thought, cognitive field theory and behaviorism.

In cognitive field psychology the individual's perceptions and behaviors grow out of configurational wholes, or the relationships among the elements of a total perceptual field. This holistic or gestalt view of a

person's interaction with the environment is in contrast to the atomistic approach of the behaviorists who deal with very small increments of perceptual input in isolation from one another. Modern day educational utilization of the cognitive field theory is most closely associated with the open classroom, discovery learning, manipulative materials, and such developmental theorists as those of Jerome Bruner and Jean Piaget. Behaviorism advances the atomistic perceptions of human learning whereby knowledge is divided into small increments and given to a learner while controlling his interior and exterior environments. The modern proponents of behaviorism, B. F. Skinner through his concept of operant conditioning, and Robert Gagne through the "systems approach" to curriculum management, are by far today the most formidable figures in influencing curriculum in the schools of our country.

Psychological studies of cognition and resulting learning theories have in the past been based upon careful observation of humans and animals, chiefly their abilities to store and recall information under a variety of conditions. Recently developed laboratory instruments and techniques have produced a great surge in the understanding of the structure and operation of the brain. Studies of accident or disease damaged brain tissue, using brain wave mapping and microprobes inserted directly into the brains of humans and laboratory animals have brought great advances in locating the sites of specialized stimuli reception and processing. At a yet more basic physiological level researchers can now, with the aid of computers, analyze complex brain proteins, and using improved staining techniques produce electron microscope photographs of brain cells and their structures. A clearer picture of the chemistry and structure of the extraordinary human brain is emerging from a wealth of basic research studies.

STRUCTURE OF THE NERVE PATHWAY

The human brain is made up of an estimated 200 billion nerve cells (neurons) with each neuron having from twenty to four hundred connections with other neurons. Each neuron acts as an independent transmitter of electrical/chemical signals. A neuron generally receives stimulation through root-like dendrites that project from the cell body. An electrical signal travels through the cell body and along a rope-like projection (axon) to finger-like projections at the terminus. When a stimulus of sufficient strength arrives at the terminus of the axon, a special protein (neurohormone) is ejected from the terminus into the fluid filled space (synapse) that separates the axon from the adjacent cell.

The neurohormone causes the membrane of the adjacent cell to permit electrically charged particles to rush into the cell. These electrically charged particles generate a weak current and the process is

repeated again and again as the stimulus is transmitted along a neural pathway. Its chemical nature creates a great dependence upon naturally occurring hormones and enzymes for the proper transmission of nerve impulses. The normal function of the brain synapses is dependent upon the chemicals that exist in billions of brain synapses. These chemicals, depending upon the strength of their presence, may suppress or enhance brain function. In short the brain is highly sensitive to chemicals that exist in the fluid that bathes its billions of cells.

To add to the chemical complexity of the neural transmission system, it has been found that in addition to the synaptic processes just described, within the nerve cells complex proteins are manufactured as a by-product neural activity. These proteins may be associated with both shortterm and of longterm memory. A mounting array of research based knowledge of brain structure and function permits speculations on the nature of the cognition process and its application to learning theories.

Observation #1: Chemicals affect brain function. About thirty complex proteins taken from brain tissue and fluids have been identified as affecting brain function, either by stimulation or depression. (DeWied, Versteeg 1978; Hansl 1978, Hansl 1979; Kovacs, Bohos, Versteeg, 1979.)

Lecithin, a health food derivative of soybeans, contains one of the brain's most pervasive neural hormones, when taken orally has been found to increase the ability of severely senile subjects to recall information by a factor of fifteen to twenty percent. A chemical dubbed PRL-8-53 was found to enhance the memories of patients suffering from senile dementia by an amazing 152%. A hormone that occurs naturally in the midbrain, Vasopressin, has been found in a number of experiments to enhance the retention and recall of information.

The relative abundance or scarcity of specific hormones in various centers of the brain have been linked to mental illness and diseases that affect the central nervous system. Parkinson's disease, for instance, responds well to the treatment with neurohormone, dopamine, and hyperactivity in children has long been treated with various drugs that affect the central nervous system. Treatments for severe depression and schizophrenia are currently being developed based upon the hypothesis that these forms of mental illness are the result of neurohormone deficiencies.

Implications: In the future intellectual deficiencies and mental illness may be as treatable as acid stomach or high blood pressure, and brain fluid analysis may be a primary evaluation tool for early intervention programs.

Observation #2: Brain cells not used will fail to develop fully. When physiologist sutured closed the eyelids of laboratory rats, and after

several weeks examined the unstimulated brain tissue, found the cells to be greatly underdeveloped and atrophied. (Hubel and Wiesel, 1979) These unused cells show poor internal definition and little connectivity with adjoining cells. The lack of stimulation apparently deprives the cells of activity necessary for normal development. Other studies have been carried out where newborn cats were subjected to an environment that contained only vertical lines. Subsequent to several weeks of treatment it was found that the subjects could not see horizontal lines, only vertical lines. Those cells that receive the horizontal line stimuli did not develop their abilities to function. Other evidence of the importance of stimulation to the normal development of brain cells is offered by ophthalmologists who have discovered that children who suffer from severe convergence problems where one eye functions minimally, dominated by the other, surgical correction must occur by about age three or the weak eye will never gain normal functioning levels. There is similar experience with correction of astigmatism in children through the use of eyeglasses. When the correction does not occur by age two or three, sight, though improved through the use of corrective lenses, remains somewhat blurred. If the experiences of these researchers may be generalized to parts of the brain other than the visual cortex the need for early and active stimulation of all parts of a developing brain is required for its proper development.

Implications: Early educational experiences which involve the stimulation of all parts of the brain are necessary for the brain's physical development. And the detection and intervention where problems involving sensing and processing of environmental stimuli occur must be accomplished at the earliest possible age to prevent permanent dysfunction due to poor brain cell development.

Observation #3: Both temporary and permanent change occur through use of brain cells.

Photographs generated by workers using the electron microscope reveal a number of changes that occur as neurons undergo repeated and long term stimulation. Some of the changes are:

- a) an increase in the number of "pockets" containing transmitter hormones that appear at the terminus of neural axons. (Kents, 1970; Trubatch, Van Harreveld, and Loud 1979)
- b) a build up of protein material on the post synaptic membrane making the membranes thicker. (Greenough, Westyk, and Voog 1978; Stryker and Sherk 1978)
- c) with continued concentrated stimulation the thickened post synaptic membranes become perforated and break into smaller sections.
- d) nuclear proteins are synthesized within the neurons (DeWied and

Versteeg 1978; Kandel,1978; Mark, 1978; McIlwain, 1978.)

e) dendritic “trees” grow and branch markedly, thus increasing the number of synaptic connections (Cowan 1979; Nauta and Feirtag, 1979.)

Implications: It is reasonable to assume, since repeated stimulation of a subject that all or some of the physical changes that occur in neurons are also related to their ability to reproduce a memory. Since the structural changes occur only through use it appears that to fully develop the brain’s capability to transmit stimuli it must be used. And generally speaking, the greater the length and frequency of the periods of use, the greater will be the permanent changes that occur.

Implications: The brain is not an “engine” that only requires it be turned on to begin functioning at its fullest potential. The power of the brain lies in the development of physiological structures. These structures and the capacity of the brain may only be developed through activity.

Observation #4: The brain is made up of a number of specialized parts; the parts are joined by connecting neurons (Walle and Nauts, 1979.)

The cerebral cortex is a thin, six layered tissue of neurons, measuring about thirty by forty five centimeters when layed on a flat surface, but taking on many convolutions when squeezed into the human skull. This collection of 800 million or so neurons represents the one prominent structural difference between the brains of humans and those of lower animal forms. The cerebral cortex provides distinct receptor and processing areas for the human senses. There are also association and memory processing areas that are interconnected to the visual, tactile, hearing, olfactory, and taste receptor regions and several specialized regions related to language, spatial relations, and facial recognition.

The specialized regions of the cerebral cortex with an extensive system of interconnections are also joined to the other major regions of the brain. The thalamic or mid-brain area thrusts into the middle of the cerebrum and is the part of the brain that controls the basic drives (hunger, thirst, sex, etc.) and is the center of the emotions. It is through the thalamus that incoming sensory signals are directed to the various special areas of the brain. On the underside of the cerebral cortex and in the region of the mid-brain there is a fold of brain tissue (hippocampus) that has many connections to the cerebrum and is important to the function of the long term memory. An almond shaped cluster of neurons (amygdala) which lies in the same area is an important association pathway for several regions of the cerebrum and is essential to the function of emotional memories. The remaining major portion of the brain, the cerebellum, controls the body’s fine motor coordination and this structure possesses many connections to the cerebrum.

Even the simplest act of recall creates activity in several regions of the

brain. This fact is demonstrated through the use of sensors attached to the skull that record the electrical nature of brain wave activity. Complex problem solving, active recollection, and creative activity require extensive interaction among various brain centers utilizing systems of connecting neurons.

Implications: Developing the human brain to its fullest capacity requires the active interaction over a period of time of all its specialized regions. Through activity, it appears the individual cells reach their fullest potential for transmitting impulses and the network of dendritic spines with their synaptic connections achieve maximum growth. The brain's full potential for problem solving and creative activity may best develop in an environment in which the learner is involved with activities that require the interactive involvement of many of its specialized areas.

The recall of an event appears to be the product of simultaneous stimulations of memory traces in the various receptor and processing areas of the cerebral cortex and the emotional memory traces that reside in the region of the mid-brain. It appears that the more sensory areas that are stimulated and the stronger the emotional impact at the time of an event the greater will be the chances that the event will be recalled. Another way to view this model is that strength of a memory is the sum of the strengths of the memory traces from all of the sensory and emotional regions.

A student who attempts to recall the title of a Shakespearian play may first recall that the play was read in class; then he may chuckle as he recalls his own reading of the part of the witch; then the memory of a fellow student's repeated efforts to impart enthusiasm to a lifeless performance as he spoke, "Lay on McDuff"; and then the name Macbeth flashes into his mind. The student has scanned several areas of the brain verbal, emotional, and auditory, which accumulatively produces the desired memory trace.

The implications for teaching for this model of cognition may be fairly obvious. Most apparent is that the more sensory receptor areas that are utilized during learning the greater is the chance that the information will be recalled through association. This model supports the notion of multisensory learning, and since emotional memory is viewed as a viable memory trace that is capable of activating the recollection processes, students' feelings, and emotional climate of the classroom, appears to be important ingredients in building a positive learning environment.

One final implication of the model of cognition centers about the cognitive level of much of the learning that is taking place in today's schools, especially in those states and school districts that employ management systems as a method of guiding instruction in basic skills. Where test taking and seat work constitute a large part of the activities of students, interaction among the specialized regions of the brain is

restricted. Although direct methods of instruction have proved to be very effective in producing gains in the basic skill areas, the restriction of time placed on more creative and intuitive learning is costly in terms of providing well rounded programs for students. Teachers may alleviate some of the deficits that exist in the creative and problem solving processes of students programs by utilizing experiences that cause children to interpret, infer, create, write, and orally discuss ideas. Many teachers have long known of the value of such activities for children at all levels of achievement and ability. Increased knowledge of the physiology of the brain reinforces these practices.

In summary, what increased knowledge of the human brain's structure and development appear to say to educators is to use it. Engage the child in intellectually stimulating activity as early as possible. And in addition to developing children's abilities to memorize information, challenge them to utilize all of their brain's specialized areas and build the interconnective networks of neurons that will permit them to reach their highest potentials as human beings.

BIBLIOGRAPHY

- Desiraju, T.. "Electro physiology of prefronted dorsolatered cortex and limbic cortex elucidating the basis and nature of higher nervous associations in primates." *The International Brain Research Organization Monograph Series*. 1979, 4,79-89.
- DeWied, D., and Versteeg, D.H.. "Neuropophyseal principles and memory." *Brain*. 1978, 101, 403-445.
- Doty, R.W.. "Neurons and memory: Some clues." *The International Brain Research Organization Monograph Series*. 1979, 4, 53-56.
- Greenough, W.T., Westk, R.W., and Voog, T.J.. "Synaptic plate perforations: Changes with age and experience in the rat." *Science*. 1978, 203, 1096-1098.
- Hansl, N.R. and Hansl, A.B.. "Learning and memory improvement through chemistry: dreams or reality in the offing?" *Phi Delta Kappa*. 1979, 61, 264-265.
- Hansl, N.R. and Mead, B.T.. "PRL-8-53: Enhanced learning and subsequent retention in humans as a result of low oral doses of new psychotsapic agent." *Psychopharmacology*. 1978, 56, 249-253.
- Kandel, E.R. "Cellular aspects of learning." *The International Brain Research Organization Monograph Series*. 1979, 4, 3-16.
- Kents, G.L., Bohos, B., Versteeg, H.G.. "The effects of vasopressin on memory processes: Neurotransmission." *Neuroscience*. 1979, 11, 1529, 1537.
- Mark, R.. "Sequential biochemical steps in memory formation: Evidence from the use of metabolic inhibitors." *The International Brain Research Organization Monograph Series*. 1979, 4, 127-226.
- Mathies, H.. "Biochemical, electorphysiological and morphological correlates of brightness discrimination in rats." *The International Brain Research Organization Monograph Series*. 1979, 4, 192-315.
- Stryker, M.P., and Sherk, H.. "Modification of cortical orientation selectivity in the cat by restricted visual experience: A reexamination." *Science*. 1979, 19, 904-906.
- Trubatch, J., Van Harreveld, A., and Loud, A.V.. "Changes in shape of dendrite spines resulting from KCL and 4-aminopyridine stimulation of frog brains." *The International Brain Research Organization Monograph Series*. 1979, 4, 37-52.

A PROPOSAL: SEPARATE HELP FROM APPRAISAL IN THE TEACHER EVALUATION PROCESS

R. A. Rothberg

Introduction

Everyone would probably agree that teacher evaluation is necessary in any educational endeavor. Questions arise, however, when one attempts to provide for the improvement of instruction within the traditional administrative procedure called teacher assessment.

The following proposal separates teacher improvement (formative process) from determining whether personnel meet minimal expectations; whether one should be rehired; modification of assignments; and rewarding superior performance (summative education). Teacher improvement — or professional growth — needs to involve many people — the teacher him/herself; other teachers; department chairmen or grade level chairmen; students; parents outside individuals; and even the administrator! The summative evaluation plan is separate and apart from the growth process and should only involve the administration and the teacher. The following suggestions are not revolutionary or even new to the field. They are not, however, happening with much frequency in American schools. It would appear to be an important consideration to those concerned with improving the quality of education.

I. THE FORMATIVE PROCESS

The formative process is concerned with the improvement of instruction. It is an ongoing professional development plan that could involve the teacher, a peer-coach, the administrator and possibly, and outside consultant.

This process considers many teachers to be self-directed professionals concerned with professional growth. It implies that a good number of teachers know what they can do better but are often unable to find solutions without help from others (Rothberg, 1979)

Administrators may be helpful, but because of their appraisal role, they have difficulty developing a climate of trust. Therefore, other teachers, department chairmen, and/or outside consultants can be helpful in providing appropriate feedback.

When is Help Helpful? Steps in the Process:

1. Activities to develop teacher awareness, understanding, and internalizing of what is effective teaching and how it relates to him/her specifically should occur initially. One way to begin this training is in a two day (12 hours) work session early in the school year where staff

members can examine teacher effectiveness research; complete self assessments; identify a staff member with whom to team; identify growth goals (teacher, learner, program, organization); develop action plans; and analyze observation and feedback skill development.

2. Each teacher will submit a Professional Growth Plan to the principal and discuss it in a “goal setting” conference early in the school year. This plan should include the goal setting for the year and the strategy to accomplish these objectives. The strategy needs to be specific, challenging, realistic, manageable, and measureable, if at all possible.
3. Ongoing conferencing, observation, feedback between the teacher and his/ her peer-coach throughout the school year will occur. This means, of course, that teachers will have to make time to talk to one another and that the administration will be supportive in covering classrooms and facilitating observation and conferencing time.
4. One day each grading period, department chairman, team leader, grade level chairman, etc., will monitor progress of the staff member’s growth plan. The chairman and teachers conference to discuss, modify and adjust action plans. The objective in this relationship is to provide additional non-judgmental feedback of a helping rather than a evaluative nature.
5. Throughout the year, an outside consultant will conference with teachers, observe upon request, discuss action growth plans, speak with chairmen, and in other ways, attempt to facilitate teacher’s professional growth. Having someone from the “outside” who can stimulate the group can be helpful and keep the organization thinking about improvement goals. It is easy to forgo developmental activities in the press of day-to-day problems.
6. At the end of the school year, each teacher will submit a written analysis of how well the growth plan progressed to the principal and will discuss it at the end of the year conference. “How well did I do in accomplishing my goal(s) for the year,” needs to be addressed within a supportive environment separate and apart from, “How many Satisfactories and Needs Improvement did I get?”

II. THE SUMMATIVE SYSTEM

Minimum performance expectations should be developed by the principal and teaching staff and formalized in a job description. The following items are typically included and evaluated:

1. Meets and instructs students at designated locations and times.
2. Develops and maintains a classroom environment commensurate with

the teacher's style, norms of the building program, appropriate to a classroom activity, and within the limits of the resources provided by the district.

3. Prepares for assigned classes, and shows written evidence of preparation and implementation on request of the immediate supervisor.
4. Sets and maintains acceptable standards of classroom behavior.
5. Provides an effective program of instruction based on the needs and capabilities of the individuals or student groups involved. This should include, but not be limited to:
 - a. Review of previously taught material, as needed.
 - b. Presentation of new material.
 - c. Use of a variety of teaching materials and techniques.
 - d. Provide for continuous checking of student understanding.
 - e. Evaluation of student progress on a regular basis.
6. Correlates individual instructional objectives with the philosophy, goals, and objectives slated for the district.
7. Takes all necessary and reasonable precautions to protect students, equipment, materials, and facilities.
8. Maintains records as required by law, and administrative regulations.
9. Assists in upholding and enforcing school rules, administrative regulations.
10. Makes provision for being available to students and parents for education related purposes outside the instructional day when necessary and under reasonable terms.
11. Attends and participates in faculty, department, and district meetings.
12. Cooperates with other members of the staff in planning instructional goals, objectives, and methods.
13. Assists in the selection of books, equipment, and other instructional materials.
14. Works to establish and maintain open lines of communications with students, parents, and colleagues concerning both the academic and behavioral progress of all students.
15. Establishes and maintains cooperative professional relations with others.
16. Performs related duties as assigned by the administration in accordance with school policies and practices (McGreal, 1983)

The appraisal of these minimum expectations will typically be made through the administrator's daily contact and interaction with the staff member. When problems occur in these areas, the staff member will be contacted by the principal to remind the staff member of minimum expectations in the problem area and to provide whatever assistance

might be helpful. If the problem continues or recurs, the principal, at his/her discretion, may prepare and issue to the teacher a written notice setting forth the specific deficiency with a copy to the teacher's file. In the unlikely event that serious, intentional, or flagrant violations of the minimum performance expectations occur, the principal, at his/her discretion, may put aside the recommended procedure and make a direct recommendation for more formal and immediate action.

State law generally requires a formal assessment instrument to be on file. An assessment instrument can be developed from the items previously described and evaluated using a simple type of "yes" or "no" scale. In other words, these things are either done or they aren't without any degree of competency consideration.

Annual contract teachers might be evaluated differently from continuing contract or tenured teachers, the difference usually being a quantitative factor. That is, the annual contract teacher might have more formal observations and written evaluations than the tenured teachers during the year.

The principal could also, at his/her discretion, ask the teacher to complete the form as a self-assessment for his (the principal's) signature. If one is truly concerned with improvement of instruction, this minimal competency requirement probably has little meaning other than satisfying a legal requirement.

SUMMARY

The basic assumption in this plan is that separation of formative assistance from the summative evaluation must occur in order to provide for the improvement of instruction. These two functions must be clearly identified with necessary time and effort spent in instructional improvement goals. It is logical to assume that if more time is spent examining teaching effectiveness and if the process is shared by many individuals in the school, the opportunity for better instruction is possible. Most current systems only provide for evaluation and do little to assist individuals in analyzing their performance. How much time and effort can we afford to expend in this endeavor? The real issue is — are we really willing to pay the price and make the sacrifices necessary in order to do a better job and help teachers do a better job of teaching?

BIBLIOGRAPHY

- McGreal, Thomas L. *Successful Teacher Evaluation*. Alexandria, Virginia: Association for Supervision and Curriculum Development, 1983.
- Rothberg, Robert A. "Helping Teachers Improve Their Teaching". *The Clearing House*. 53:1-2,103, October, 1979.

THE EMERGING TECHNOLOGIES — THEIR IMPACT

Richard A. Cornell, Ed.D.

“The reason so little instructional technology is used in education today is that its visible “faults always end up being compared with the teacher’s invisible virtues.”

Hugh Beckwith - 1971

The source from which the above quote was taken has long ago been lost - chalk it up to a failing memory, but Beckwith’s statement is as accurate in 1984 as when it was written. We educators are. . .a defensive lot. We guard our turf as if it lie protected within the shadow of the Sphinx, rarely emerging into the light of new ideas. Events of the past few years, however, may force us all into a perceived educational stratosphere of the 21st Century, now, not when we have “time to get ready for it.” (Read survival in this.)

Many of us appear reluctant to take that initial step - that of coping with the emerging technologies which increasingly surround us, both from within and outside of the classroom environment. We must, not only cope but, embrace! To do otherwise is tantamount to inviting pedagogical disaster.

Look around you and there it is: society rushing past the schools and universities as though they were an afterthought, a minute pause along the way to more and more independent learning modalities.

Our severest critics proclaim we are unresponsive to society’s needs. In many cases, we are. We hold fast to cherished and fundamental beliefs relating to the “whole person” yet, when faced with the prospect of crossdiscipline opportunities for our students, hurriedly dart behind our protective. . .and collective mantel of area specialization.

In this respect, one might feel there is, indeed justification for such defensiveness, especially in light of continuing calls for a return to the “liberal arts” concept when the training of teachers is the topic and with it, a parallel call for the abolishment of schools of education. Yes, it does give some cause for concern and possibly, even introspection on our parts as to the worth of what it is we are about.

If, as many critics indicate, teacher educators tend toward survival of the species, and that is the fundamental aim of the ones being criticized, then it is deserved. There are those of us who feel otherwise, who search long and arduously for new material, new methods, all of which will

allow us to remain current in what is happening around us. It is this search for currency, coupled with increased accountability as determined by the various accrediting agencies, which will increasingly establish the course along which the contemporary school of education must take.

One precept which all of us must surely face is the fact that we live in a society which has, almost within an historical millisecond, moved us from the technological age to that of information. Despite the cries, irrational as they may be, of “back to the basics,” we can’t turn back. The “basics” of the 80’s and beyond, if they are to be of any use to us, must go well beyond the three R’s. They must include, first and foremost, computer literacy. . .and competency. With such skills comes the parallel ability to locate and use a wide diversity of information from countless sources. These new basics must also include the critical skill of extrapolation. What good is all of this new information if one can’t form conclusions, make inferences, and find similarity of meaning?

Certainly, another basic related to these emerging technologies is that of media analysis and insightful criticism. If, as the pollsters would have us believe, increasing numbers of our citizens are now relying on television as the major channel through which they receive the news, what does this auger for the future of the print media? What, indeed, does this say to those who now manage our vast repositories of books?

Suffice to say, if you rejoice in being known as a television “snob,” and the pollsters are right in their assertions, you’ll soon become an educational artifact, cherished perhaps, but still, an artifact. There are just too many attended messages coming at us via the medium of television. They are of all types and from differing sources but, your students bring them into your classrooms.

Aside from some of these societal pressures upon us to “retool” for the 80’s and beyond, there remain other more immediate and pragmatic reasons as to why we should remain current with respect to emerging technologies. Major among these reasons are the changing trends in the process of accreditation for there exists already, a definite emphasis on technology, especially in the newly revised standards as issued by the National Council for the Accreditation of Teacher Education (NCATE)

Within the past few months the policy has been adopted to include, on every NCATE visiting team, an educational technologist. To help this professional, as well as his or her fellow teammates, two documents have been published by the Association for Educational Communications and Technology (AECT). They are: *Guidelines for the Accreditation*

of Programs in Educational Communications and Information Technologies and Standards for College and University Learning Resources Programs.

Essentially, these documents contain the requisite guidelines/-standards against which the NCATE teams will measure both the quality of the academic programs offered, as well as, the degree of instructional support offered both within the college and the university as a whole, as relates to the application and use of the emerging technologies.

Of special significance are two points:

1. When looking at the instructional content of the teacher education program, the total and integrated use of the emerging technologies, across the spectrum of education courses taught, will be examined. No longer will institutions be able to point to one or two "media methods" courses as meeting this requirement.
2. When evaluating the instructional support elements within an institution, the media consultant on the NCATE team will come armed with definitive standards which directly apply to both the "emerging" and traditional technologies. Again, the evaluator(s) will be seeking sources of support for this area, both within and outside of the institution's College of Education.

The astute administrator, if he or she has not already done so, will obtain their own copies of the documents mentioned. Both are available from AECT by writing them at 1126 Sixteenth Street, N.W. , Washington, D.C. 20036.

It is important that the reality factor is, once more, reinforced, that the information contained within these documents will increasingly become an integral aspect of NCATE evaluations, from this point forward. The programmatic accreditation guidelines have already been adopted by NCATE. There appears little doubt that the standards for learning resources support services will soon follow. They are inextricably linked as they stand, both having been developed by professional task forces within AECT.

The message coming to you within this article should, by now, be clear. Quality education also includes quality support. Those who evaluate our teacher education programs, fully cognizant of societal and pedagogic changes occurring around us, are including the emerging technologies as an integral part of the quality measurement process.

Will your own program measure up and boldly face that ultimate moment of truth. . .when the degree of visible faults of these emerging technologies will be, at last, matched to the invisible virtues of those who use them?

ABSTRACT OF DISSERTATIONS
UNIVERSITY OF CENTRAL FLORIDA
FLORIDA ATLANTIC UNIVERSITY
COOPERATIVE DOCTORAL PROGRAM

A Comparison of Perceptions of Specific Learning Disabilities Teachers with Exceptional Student Education Lead Teachers Toward Goal Achievement.

By

Patricia Barrack Brater

1983

Chairmen: Robert Rothberg & Ted Urich
Department: Administration & Supervision

The purpose of this study was to assist in the program evaluation process by comparing perceptions of Specific Learning Disabilities teachers with Exceptional Education lead teachers toward indicators of goal achievement.

The procedures employed in the study involved a review of the literature, and the design, field testing, and utilization of the Goal Achievement Instrument. Data was obtained from the 111 teacher questionnaires and the 111 questionnaires were completed by lead teachers who rated individual teacher performance of goal indicators. Analysis of variance was utilized to determine whether there were differences in ratings between the groups. A follow-up study was completed to determine goal achievement indicators which might have been overlooked in the goal achievement indicator development process.

1. There were significant differences in responses between resource Specific Learning Disabilities teachers and lead teachers, indicating that data from neither group should be used in isolation to determine levels of goal achievement.

2. There were no significant differences between self-contained, elementary, and secondary Specific Learning Disabilities teachers when each group's ratings were compared to lead teacher ratings. This indicated that either teachers or lead teachers could be used to determine levels of goal achievement for these groups of teachers.

3. Teachers in all groups were achieving goals at a satisfactory level, as perceived by teachers and by lead teachers.

4. Several additional items were developed and recommended for inclusion to the Goal Achievement Instrument before use in the formal program evaluation process.

In-service programs for teachers, guidance committee activities, strong financial support to the classes, and the positive attitude of teachers may have been important factors in leading to the high performance levels achieved by Specific Learning Disabilities teachers in Brevard County, Florida.

The Effect of the Individualized Manpower Training System Instruction Program in Basic Math Skills on the Achievement Level and Dropout and Failure Rate of Mathematics of Business Students at Daytona Beach Community College

By

Kathleen Noble Miller

1983

Chairmen: Ernest Miller and Joe Cook

Department: Curriculum & Instruction

The purpose of this study was to determine if requiring business mathematics students at Daytona Beach Community College (DBCC) to participate in a remedial mathematics program would increase their achievement level and decrease the failure and dropout rate.

The 80 students enrolled in business mathematics who scored at the 9.9 grade level or below on the Test of Adult Basic Education (TABE), math fundamentals section, adapted from the California Achievement Test, 1967 edition, participated in the experiment. A posttest only control group design with randomization was developed. The 80 students were randomly divided into two groups. The treatment group participated in the Individualized Manpower Training System (IMTS) remedial program; the control group did not. Three achievement tests were developed, validated and administered to the students in both groups.

The Finn Multivariate statistical program for multivariate analysis of variance (MANOVA) and the SPSS statistical program for one-way analysis of variance (ANOVA) were used to determine if no significant difference existed at the 0.05 level between the achievement levels of students who receive remedial instruction and those who did not. The

scores from the three achievement tests were analyzed. The results of the MANOVA and ANOVA procedures indicated that the achievement level of the treatment group was significantly higher than the achievement level of the control group, and that the effects of the three achievement tests within each group were interacting.

The SPSS program for chi square was used to determine if there were no significant differences between the number of students in the treatment group and control group who passed, failed or dropped the course. The computed chi square was not significant at the 0.05 level. Thus, no significant differences existed between the number of students in the treatment and control group who passed, failed or dropped the course.

The conclusions drawn from the findings include:

1. Requiring business mathematics students at DBCC to participate in the IMTS diagnostic/prescriptive remedial program in business mathematics will raise their achievement level.

2. The IMTS remedial program in basic mathematics skills is not likely to significantly reduce the failure or dropout rate of business mathematics students at DBCC.

Spanish Language Learning as a Determinant of Knowledge of Hispanic Culture in Secondary Schools

Carl R. Baldo

1984

Chairmen: David Mealor and Joe Cook

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The purpose of the study was to determine if the learning of the Spanish language is a determinant of knowledge of Hispanic culture in secondary schools.

The consulted literature provided a dichotomy of opinion regarding the generally accepted statement that foreign language instruction does automatically afford students an opportunity to become aware of the cultural aspects of the targeted group in comparison to students who had never studied a foreign language. However, the literature also indicated that this assumption has not been substantiated by research.

A total of 408 students (204 Spanish language students and 204 non-Spanish language students) from eight high schools in Brevard County, Florida, were selected to participate in the study. Half of these students

had attended a minimum of two years and a maximum of three years of Spanish language classes. There was no attempt to control for sex, race, age, socio-economic status or measured intelligence. Since an appropriate commercial instrument to measure the intended goal was not located, the writer designed a data collection instrument. The instrument was validated by standard statistical procedure.

The researcher found that no significant difference in knowledge of Hispanic culture existed between students in Spanish language classes and students in non-Spanish language classes. However, a significant difference did exist in knowledge of Hispanic culture between Spanish II and Spanish III students. Students in Spanish III language classes scored consistently higher than students in Spanish II language classes. It was also evident that when students in Spanish II were parcelled out and Spanish III students' performance on the test was compared with non-Spanish language students there was a significant difference in favor of Spanish III language students.

Recommendations that a careful analysis of the Spanish language curriculum be undertaken and that there be developed and implemented cultural component objectives starting with the Spanish I course were among those growing out of the study.

Job Satisfaction Among Principals in Selected School Districts in Central Florida

Mary Helen Callarman

1984

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This study examined job satisfaction as it affected principals of large and small high schools and middle/junior high schools on the dimensions of work, pay, promotion, supervision, and co-workers. More specifically, 125 principals in selected school districts of Central Florida were asked to complete the Job Descriptive Index (JDI) to determine if there is a difference in the levels of satisfaction among and between the levels of principalship and size of school.

The statistically significant conclusions drawn from the data were:

1. Principals of large schools were more satisfied than principals of small schools on the dimension of promotion.
2. Principals of large middle/junior high schools were more satisfied on the dimensions of promotion, supervision, and co-workers than principals of small middle/junior high schools.

3. Principals of large middle/junior high schools were more satisfied on the supervision dimension than those of large high schools.

4. Principals of small high schools were more satisfied than principals of small middle/junior high schools on the promotion and co-worker dimensions.

Perhaps the most important conclusion drawn from this research is that principals at all levels in large and small schools alike are more satisfied with those dimensions of the job over which they have some control and that pertain to interpersonal relations-co-workers, supervision, and the work itself—and are least satisfied with those dimensions over which they have little or no control—pay and promotion.

The Determination of Instructional Staff Concerns About Navy Training Devices

William F. Cavitt

1984

Chairmen: Robert Wiegman and Tom Harrow

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An effective formative evaluation process to determine instructional personnel concerns about training devices is needed. Knowledge of these concerns will allow managers to take appropriate action to improve device use. This study was designed to describe Navy instructional personnel concerns about training devices and present interventions to improve attitudes about these devices. The instruments used were a Stages of Concern Questionnaire (SoCQ) modified from the SoCQ originally developed by Gene E. Hall and his associates at the University of Texas at Austin, and a Stages of Concern Intervention Survey (SoCIS) developed for this study. Validity and reliability coefficients were calculated for both instruments prior to their use in the study.

Using the SoCQ, 116 Navy instructional personnel at three locations were surveyed about five training devices. One hundred five personnel surveyed responded, equalling a 90% return rate. This survey indicated that individuals' rank/rate, age, and number of instructor duty tours have little influence on concerns about training devices.

Whereas, various factors appear to enhance an individuals' attitude toward the devices' ability to improve training. These enhancement factors are: time as a Navy educator, educational degrees, time at present school, time associated with a device and formal training on a device. There was little difference detected in instructor and ad-

ministrator concerns about training devices.

One hundred Navy instructional personnel were surveyed to determine which interventions were perceived as effective in changing attitudes about training devices. Eighty-one percent of the questionnaires were returned. Various interventions were perceived effective in changing attitudes about training devices and were presented in this study.

Interventions were perceived as having differential impact depending upon whether the instructional personnel had high self, high task, or low impact concerns. It was concluded that the revised SoCQ provided valid and reliable stages of concerns of Naval instructional personnel. The information was judged to be useful in designing strategies to improve the acceptance and utilization of an instructional device. It was also concluded that the patterns of concerns expressed by Navy instructional personnel are generally similar to patterns expressed by other educators. The key exception is that Navy instructional personnel displayed lower concerns in the area of management.

**Articulation in the Biological and Physical Sciences
between the University of Central Florida
and Valencia Community College**

Thomas John Flagg

1984

Chairmen: John Armstrong and Herbert Stewart

Department: Curriculum & Instruction

Valencia Community College (VCC) transfer and University of Central Florida (UCF) native students majoring in biological or physical science from 1976-1980 were compared. Comparisons included upper division GPA and course hours completed for BS Degreed students, lower and upper division GPA for all students, dropout data, and retaking of core curriculum courses. Means, standard deviations, and tests were utilized. Equated via standardized tests, VCC and UCF student transcripts produced raw data for each comparison.

Of twenty analyses, only three proved significant: (1) lower division GPA for Category 2 (below population mean) biology majors; (2) upper division hours completed for Category 1 (above population mean) physical science majors; (3) hours completed at dropout for Category 2 biology majors. In the 17 other areas of analysis there was no significant difference between transfer and native students.

Transfer shock is a reality for VCC students majoring in natural

sciences. Strong counseling efforts at VCC should be directed at potential biology majors who score below the population mean on standardized tests. Warnings and/or recommendations concerning the rigors of science majors would benefit these students educationally and financially.

**A Study of the Effects of the
Staff Development Center at Valencia Community College
on Faculty Awareness and Use of Educational
Concepts, Media Materials, and Testing Strategies**

**Donna A. Nickel
1984**

*Chairmen: Robert Rothberg and Joe Cook
Department: Curriculum & Instruction*

The Curriculum and Instructional Development Center at Valencia Community College was established through funding under the Advanced Institutional Development Program - Title III from 1977 to 1981. This study measures the awareness and use of educational concepts, media materials, and testing strategies among the full-time faculty who were teaching at the college in 1977. Those faculty members who participated in the Curriculum and Instructional Development Center completed the Survey a second time at the beginning of the year's experience in January and again at the end of the year's experience in December. In January 1982, at the completion of the project, only those full-time faculty members who had been full-time faculty members in 1977, who were still at the college and who chose not to participate in this Curriculum and Instructional Development Center completed the questionnaire. The effects of the year's experience on those who chose to participate is compared with the growth and change among nonparticipants.

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