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A study of the students' attitudes toward the use of peer teaching in the educational media course at the University of Northern Iowa

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Abstract

Traditionally, learning and teaching situations from elementary school through higher education do not provide opportunities for students to use each other as resources. In fact, more often than not the teacher is their main source of information and help. Such traditional modes of teaching has placed emphasis on individualizing instruction, i.e., self-paced instruction and competition. According to Johnson (cited in Waggoner,1971), in such teaching situations which are outcome-based, very little attention has been given to how students should relate to each other while working on instructional tasks. Collaborative learning modes, on the other hand, focus on learning as a cooperative undertaking (Pierce, 1982). People using a collaborative approach share not only the answers but also the processes used to derive the answers as well. Pierce suggests that the collaborative teaching and learning model is not limited to peer and cross-age tutoring for students at elementary and secondary levels, but also includes team teaching, consulting, and professional pairing on the higher education and adult education levels.

A STUDY OF THE STUDENTS' ATTITUDES TOWARD THE USE OF PEER TEACHING IN THE EDUCATIONAL MEDIA COURSE AT THE UNIVERSITY OF NORTHERN IOWA

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CHAPTER I

INTRODUCTION

Traditionally, learning and teaching situations from elementary school through higher education do not provide opportunities for students to use each other as resources. In fact, more often than not the teacher is their main source of information and help. Such traditional modes of teaching has placed emphasis on individualizing instruction, i.e., self-paced instruction and competition. According to Johnson (cited in Waggoner,1971), in such teaching situations which are outcome-based, very little attention has been given to how students should relate to each other while working on instructional tasks. Collaborative learning modes, on the other hand, focus on learning as a cooperative undertaking (Pierce, 1982). People using a collaborative approach share not only the answers but also the processes used to derive the answers as well. Pierce suggests that the collaborative teaching and learning model is not limited to peer and cross-age tutoring for students at elementary and secondary levels, but also includes team teaching, consulting, and professional pairing on the higher education and adult education levels.

The cooperative and collaborative teaching and learning approach was used in the Educational Media course at the University of Northern Iowa during the 1994 Spring semester. The approach created some vital changes to the course. The students formed groups of fours or fives and at least one member of the group was required to attend one of the three computer technology workshops being held simultaneously each week. The student became the "expert" of that particular

technology taught in the workshop, and he or she was then expected to meet with the other members of the group to teach them the technology that he or she had learned. This new approach had made students turn towards their peers as "resource persons" rather than being traditionally dependent on professors. The shift from professor-centered to a student-centered learning situation allowed students to construct new knowledge on existing schemas (Ventimiglia, 1994). Students can also share in the ownership of course content, making it more meaningful and useful. The role of professors was transformed from one of deliverer of information to one of colleague and mentor. Bllenky, Clinchy and Goldberger (cited in Ventimiglia, 1994)) referred to this role as one of a "mid-wife" who assists students in giving birth to their own ideas, in making their tacit knowledge explicit and elaborating on it. Friere (cited in Ventimiglia, 1994)) supported this approach to education with the description of educators as co-investigators and coaches. This methodology of cooperative and collaborative teaching is also important because of the skills students develop from this process approach to education. The two skills Ventimiglia (1994) stated are the ability to work together and the ability to be a life-long learner - neither of which is taught in any course or textbook.

Definition Of Terms

In this paper, the term "peer teaching" will be considered synonymous with the phrase "peer tutoring" which is defined as the system of instruction in which learners help each other and learn by teaching (Goodlad, 1989).

According to the Webster's Third New International Dictionary (1961), the word "peer" is defined as one that is of the same or equal standing (as in rank, law, age, ability) with another. The dictionary, on the other hand, defines the term "attitudes" as a disposition indicating action, feeling or mood.

The term "educational media" refers to a required course for all educational majors at the University of Northern Iowa which teaches the planning and use of resources for message development in the classroom or other locations where learning takes place. The course is designed to provide the student with experiences which will enable him or her to select, utilize, and produce a variety of resources using a systems approach to message development (see appendix A).

Context Of The Problem

Peer teaching was adopted in the educational media course at the University of Northern Iowa (UNI). The instructors felt that peer teaching would encourage the students to help each other through cooperative and collaborative teaching and learning, and work together to attain the learning goals of the course. It was also hoped that in learning by teaching, the students would be able to reinforce their understanding of the various technology taught in the workshops, and in the process find meaningful use for the technology learned. Moreover, it was felt that peer teaching would allow the students to participate in roles other than just subordinates, and such a learning experience would help them identify themselves better with their future role of a teacher.

Purpose Of The Study

The aim of this study was to identify the Educational Media students' attitudes and perceptions toward the use of peer teaching in the learning and teaching of technology. Three main research questions are asked in this study :

1. What are the students' attitudes toward the use of peer teaching ?

2. What are the students' attitudes toward their experience as "tutors" ?

3. What are the students' attitudes toward their experience as "tutees" ?

Significance Of The Study

This study aims to find out from the students' perspective how they feel about the use of peer teaching in the teaching and learning about technology in the educational media course. The researcher hopes that the findings of this study will provide the information needed to help the instructors determine the effectiveness of peer teaching from the students' perspectives and how receptive the students were toward the use of peer teaching in the teaching and learning about a particular technology.

CHAPTER II

REVIEW OF LITERATURE

Since the 1960s, peer teaching has been the subject of research to an extent never matched before (Waggoner, 1971). According to Dillner (cited in Waggoner, 1971), an increasing amount of the research has been done to gauge the effects of peer teaching on the tutor. In a peer teaching situation, both the tutor and the tutee would benefit but it would appear that the tutor would benefit more than he has before and certainly not at the expense of the tutee. The review of literature will be discussed as follows.

Effects On Tutors Taking Part In Tutoring

Observations made by Gartner, Kohler & Reisman (1971) on children teaching their peers showed that there were some observable changes in the tutor in these programs. The researchers described the tutors as having developed a greater sense of responsibility, a greater maturity, seriousness of purpose, and a better understanding of individual differences.

Waggoner (1971) summarized a series of studies in which they found the following advantages of peer teaching :

1. Peer teaching can reduce anxiety caused by vast differences in age, status, and background between student and teachers. A peer tutor may possibly communicate more easily with a student, particularly a slow one.
2. More individualized instruction is possible.
3. The tutor may increase his own understanding as well as self-esteem and

self-confidence.

4. Additional motivation for learning may come through peer teaching.

5. Peer tutors might be more patient with a slow learner.

6. Peer teaching reinforces previous learning, may recognize knowledge more effectively and increase understanding. (p. 98)

Waggoner (1971) in his review of a research conducted by Steinberg and Cazden showed that children can teach and do so effectively. According to Waggoner, both writers found that children displayed surprising competence in dealing with educational tasks outside of the teacher's span of direct control.

According to Slavin (cited in Goodlad,1989), cooperative and collaborative methods such as peer tutoring does increase the helping behaviors of students and bring about better perceptions of giving and receiving. This was reflected in a study conducted by Sharan (cited in Goodlad, 1989) which showed strong indications that team-learning methods reflect higher academic achievement.

Pierce (1982) said that there is abundant evidence to suggest that the tutor might profit as much or more than the child being tutored. Research, according to Pierce, showed that tutoring experience can sharpen the abilities of the tutor. To teach another person, however, requires deeper understanding of a particular subject area like math or a technology skill. Being associated with the prestigeful role of the teacher can go a long way toward increasing a child's self-esteem and positive attitudes toward school.

Effects On Tutees Being Tutored

According to Waggoner (1971), that those being tutored can benefit from taking part in tutoring schemes is one of the best authenticated findings of all. For instance, in a study by Erickson and Cromack (1972), reading skills of tutees were shown to have improved significantly in a six-week experiment. In a similar scheme, Mainiero, Gillogly & Wilkinson (cited in Goodlad, 1979) found that the reading skills of nine, ten and eleven year old tutees improved tremendously. Interestingly, in a study conducted by Mevarech (1985), fifth grade children achieved higher gains in mathematics when students teams were employed than when using a more traditional style of teaching. Scruggs and Osguthorpe (cited in Goodlad, 1989), studying tutoring interventions within special educational settings were amazed to find that the chief attitudinal gains were to the tutees. They suggested that the tutees' self-concept improved because of the attention they received from the tutors.

Pierce (1982) stated that peer tutoring is a classic example of the one to one teaching situation where the material to be learned can be closely matched to the learners level on a sequence of skills. In such learning situations, the tutees receive increased individualized attention.

In a study conducted by Jenkins, Mayhall and Peschka (cited in Pierce, 1982), teacher led small group was compared to one to one instruction. Results showed that students acquired more skills when a peer was conducting one to one instruction than when teachers taught small groups.

Furthermore, Pierce (1982) observed that there was increased contact and

opportunity for closeness with the instructor and corresponding learning efficiency. Social interactions occurring within partnerships reveal that the emotional bond of friendship that can develop between the tutor and the tutee will enhance the instructional situation. The fact that students spend more time with each other facilitates their ability to decipher their own non-verbal behavior. Thus, children may be more skilled than adults in interpreting non-verbal cues indicative of another child's comprehension. In a study conducted by Allen and Feldman (cited in Pierce, 1982) in interpreting non-verbal responses, results showed that children were more sensitive than adults to non-verbal cues indicative of a child's comprehension. The study indicated that children may be able to communicate more effectively with each other than adults can communicate with children. Thus, the material may be learned more efficiently. Cohen and Stover (cited in Pierce, 1982) conducted experiments designed to investigate structural aspects of math word problems which appeared to be difficult for students. Results from their study showed that tutors used simplified vocabulary, shortened information. added extra clues and a diagram. In fact the results indicated that tutors tend to use simpler and shorter statements when teaching and made special efforts to keep interest and attention.

These research examples provide evidence that students trained as teachers may be able to find better ways to get the material to be learned across to students, ways which may be more efficient just because the "teacher" and the students are closer in age.

The Value Of Peer Tutoring In Higher Education

Although most of the literature discussed earlier concentrated mainly on peer tutoring interventions within elementary and high school education, peer tutoring can contribute to most forms of education by introducing an element of reflection. According to Marton, Hounsell & Entwistle (cited in Goodlad, 1989), peer tutoring can be of particular value in the pure sciences and the arts where the primary purpose of studying may be to deepen our understanding of the physical world and social world, thereby of ourselves. In short, the use of peer tutoring offers students the opportunity to reflect about their disciplines and to make good sense or use of what they are learning. For instance, in all professions, it is important for the professional person to communicate ideas simply and effectively to other people. For example, lawyers explaining to their clients the ways in which the law affects their situation or a nutritionist explaining the types of food one should or shouldn't take based on their age or health. Peer tutoring is of course uniquely important as a component in teacher training. By acting as a tutor, an intending teacher can participate in teaching without the frustration of being a mere observer or the awesome responsibility of being in charge of a class (Gray, 1983). The experience of peer tutoring may help teacher-educator students to decide whether or not they are cut out to be future teachers. For some students, the exposure to the realities of teaching may dissuade them from joining the profession and thereby prevent them from later disappointment and frustration. For others, the perception of the immensely interesting and complicated task of teaching can show them the challenge of the profession.

The above review of literature identified peer teaching as a collaborative and cooperative teaching and learning mode that plays an important role at all levels of education. However, the researcher would like to find out how effective peer teaching can be in the teaching and learning of computer technology, i.e, in the Educational Media course from the students' perspective.

CHAPTER III

METHOD AND PROCEDURES

The purpose of this study was to find out the students' attitudes toward the use of peer teaching in the Educational Media course at the University of Northern Iowa (UNI) and how receptive they were towards playing the roles of "tutors" and "tutees" throughout the course.

Subjects

Two hundred and fifty (250) Educational Media students in the Spring 1994 session at the University of Northern Iowa were utilized in this study. Included in that number were one hundred and forty (140) females and one hundred and ten (110) males. All of the students were either elementary or secondary education majors and the Educational Media class was a required course for them to take.

Materials

A questionnaire with eighteen (18) Likert-type scale questions and five (5) open-ended questions was used in the survey (see appendix B). The first eighteen (18) questions presented the students with five possible responses namely: Strongly Agree, Agree, Neutral, Disagree And Strongly Disagree. The remaining five (5) questions were open-ended allowing the students to provide opinions and suggestions to improve the course.

The questionnaire was content-validated by experts in the Educational Psychology Department in the University of Northern Iowa (UNI). It was also field-tested by five Educational Media students to ensure that the questions were clear and contained no ambiguity.

Procedure

The questionnaire was administered to each of the students who attended one of the large-group sessions held in a lecture hall. Due to the session being held near the end of the semester when group Hypercard presentations were due, many of the students were absent. As a result only two hundred and fifty (250) students answered the questionnaire.

With the permission and cooperation of the instructors, the students were given thirty (30) minutes to answer the questionnaire. Those present completed the questionnaire voluntarily and individually under the supervision of the researcher. Brief directions covering the completion of the survey responses and background information were given. To minimize any student concern, the instructors were not present during questionnaire administration. The researcher also emphasized to each subject that this was a survey and not an exam, and that the responses given in the questionnaires are anonymous and in no way would affect their grade for the course.

Statistical Analysis

The researcher used descriptive statistics to analyze the data. Descriptive statistics were used to interpret each of the first teighteen (18) survey questions. The responses in the open-ended questions were analyzed and the most frequent and similar responses were recorded for the Data Analysis section in Chapter IV.

Summary

The participants in this study were all Educational Media students who attended the large group session two weeks before the end of the Spring 1994

semester. Two hundred and fifty (250) students took about twenty to thirty minutes to answer the questionnaire.

Descriptive statistics were used to examine the responses to the twenty-three (23) questions. The results of the analysis are reported in Chapter IV.

CHAPTER IV

ANALYSIS OF DATA

Two hundred and fifty (250) students from the Educational Media course answered the questionnaires. All of the respondents were undergraduates majoring in education. The responses in the questionnaires were tabulated using frequency counts which were converted into percentages as seen in Tables 1 and 2. The discussion pertaining to the data tabulated from the questionnaires will be divided into three parts. They are attitudes of the students as a tutor, attitudes of students as a tutee, and opinions of students toward peer tutoring.

The results from the attitudes of students as tutor questions (Table 1) indicated that on the whole the students seemed to be comfortable playing the role of a "tutor" in the educational media course. Seventeen percent (17%) strongly agree and forty nine percent (49%) agreed that they felt comfortable teaching their peers although twenty-five percent (25%) were unsure. Only one percent (1%) strongly disagreed with five percent (5%) disagreeing that they were comfortable with it. It was encouraging to note that a total of sixty-seven percent (67%) and sixty-five percent (65%) of the students agreed or strongly agreed that peer tutoring had reinforced their learning of the computer applications taught in the workshops and provided them with more hands-on experience respectively. A total of fifty-two percent (52%) of the students agreed or strongly agreed that peer tutoring had made them more confident at using the various computer applications taught; however, twenty-five percent (25%) were undecided.

Table 1

ATTITUDES OF THE STUDENTS AS A TUTOR

		SA %	A %	N %	D %	SD %	NR %
3.	Comfortable with peer tutoring in the class.	17	49	25	5	1	3
4.	Reinforced knowledge of the computer software taught.	13	54	17	5	1	10
5.	Provided more hands on experience in using computers.	15	50	15	3	1	16
6.	Becoming more confident at using the various software.	8	44	25	7	1	15
7.	Made you less attentive at the workshops.	3	10	19	49	11	8
8.	Made you more tense at the workshops.	3	16	21	55	5	-
9.	Getting more practice of communicating ideas.	7	53	35	3	2	-
10.	Gaining insight into what the teaching profession involves.	6	21	53	11	2	7
11.	Becoming more interested in learning the use of technology in education.	5	42	31	15	2	5
12.	Made the computer applications assignments more difficult to perform.	2	9	46	30	7	6

Note : (SA-Strongly Agree, A-Agree, N-Neutral, D-Disagree, SD-Strongly Disagree, NR-No Response)

When asked in questions 7 and 8 if peer tutoring had made them less attentive or more tense in the workshops, a total of sixty percent (60%) of the students disagreed or strongly disagreed for each of the questions. As anticipated, the majority, i.e., a total of sixty percent (60%) of the students had no doubts that peer tutoring had given them more practice in communication of ideas. However, it was disappointing to note that only a total of twenty-seven percent (27%) of the students agreed or disagreed with fifty-three percent (53%) being unsure that peer tutoring had given them an insight into what the teaching profession involves. As for question 11, even though thirty-one percent (31%) were unsure, a total of forty-seven percent (47%) of the students agreed or strongly agreed that peer tutoring had made them more interested in learning the use of technology in education. Furthermore for the last question in this section of the questionnaire, thirty percent (30%) of the students disagreed with seven percent (7%) strongly disgreeing that peer tutoring had made the assignments more difficult to perform. Forty-six percent (46%) of the students were undecided. The implications of the results in Table 1 will be discussed in the following chapter.

Table 2

ATTITUDES OF STUDENTS AS A TUTEE

		SA %	A %	N %	D %	SD %	NR %
13.	Made the class more enjoyable.	7	53	19	12	3	6
14.	Information given was inadequate to learn the technology	4	16	27	22	5	16
15.	Gaining more individual attention.	3	53	17	22	5	-
16.	Developing better interpersonal skills.	6	46	23	17	8	-
17.	Peers' instruction was 3 confusing.	16	51	25	3	2	
18.	Reinforced knowledge of the various computer applications.	24	41	15	16	4	-
19.	Made the course less interesting.	3	5	25	34	6	27
20	Made the tasks more difficult to accomplish.	7	12	19	25	9	28

Note: (SA-Strongly Agree, A-Agree, N-Neutral, D-Disagree, SD-Strongly Disagree, NR-No Response)

The overall results in the attitudes of students as tutee questions (Table 2) indicated that the majority of the students enjoyed being tutored since a total of sixty percent (60%) of the students agreed or strongly agreed that the class was more enjoyable with the use of peer tutoring. This positive attitude was also noted in question 19 where thirty-four percent (34%) of the students disagreed and six

percent (6%) strongly disagreeing that peer tutoring had made the class less interesting although twenty-five percent (25%) were undecided. For question 14, however, only a total of twenty percent (20%) of the students agreed or strongly agreed that the information provided by the tutors were adequate in helping them learn the technology. Twenty-seven percent (27%), however, were undecided and a total of twenty-seven percent (27%) disagreed or strongly disagreed. When asked if peer tutoring had helped them gain the individual attention that they needed in question 15, fifty-three percent (58%) of the students agreed and three percent (3%) strongly agreed. Seventeen percent (17%) were unsure. Only a total of twenty-seven percent (27%) disagreed or strongly disagreed. As anticipated, a total of fifty-two percent (52%) of the students had no doubts that peer tutoring had helped them develop their interpersonal skills. Twenty-three percent (23%) were, however, unsure, and the remaining respondents, i.e., twenty-three percent (23%) either disagreed or strongly disagreed. Unfortunately, when asked if their peers' instructions were confusing, fifty-one percent (51%) were undecided and only a total of twenty-eight percent (28%) disagreed or strongly disagreed. Only nineteen percent (19%) agreed or strongly agreed. It was gratifying to note that for question 18, a total of sixty-five percent (65%) of the students agreed or strongly agreed that peer tutoring had indeed reinforced their knowledge of the skills taught in the workshops with only fifteen percent (15%) feeling undecided. When asked in question 19 if peer tutoring had made the course less interesting, a total of thirty-three percent (33%) disagreed or strongly disagreed. Only three percent (3%) agreed and five percent (5%) strongly agreed. The remaining respondents ,i.e.,

twenty-five percent (25%) were undecided. Finally, a total of thirty-four percent (34%) of the students disagreed or strongly disagreed that peer tutoring had made the assignments more difficult to accomplish. Only 19% were undecided while the rest, i.e., a total of nineteen percent (19%) agreed or strongly agreed. The implications of the results tabulated in Table 2 will be discussed in the next chapter.

CHAPTER V

DISCUSSION

Benefits Of Being A Tutor

Reinforcing Knowledge Of The Various Computer Software Taught.

Reinforcement of knowledge had been one of the key reasons that made the instructors introduce "peer tutoring" in the Educational Media course. It was felt that having to teach or tutor someone would help reinforce the tutor's learning of the various computer applications taught and at the same time increase the tutor's retention level of the various computer commands, computer terminology and components learned in the workshops. It was gratifying to know that thirteen percent (13%) of the students strongly agreed and fifty-four percent (54 %) agreed that having to teach their peers had reinforced their knowledge of the subject matter at hand. Two reasons could have accounted for such a positive attitude. First, the fact that the students' knowledge that they have had to teach their peers could have made them more attentive in the workshops. Hence for question 7, a total of sixty percent (60%) of the students disagreed or strongly disagreed when asked if peer tutoring had made them less attentive in the workshops. Although a majority of the students were expected to feel more tense due to the responsibility of having to teach their peers, surprisingly a total of sixty percent (60%) disagreed or strongly disagreed. Second, the actual act of teaching and tutoring their peers the various software taught in the workshops has somehow cognitively reinforced their own learning of the subject matter taught in the workshops.

Getting More Hands On Experience. In a technology classroom, getting adequate hands-on experience is very important as students need the practice of using the various computer software taught in order to learn it and be comfortable in using it. From past experience, it was felt that educational media students were not getting the adequate hands-on experiences that they needed to be better at using computer applications technology. Thus, it was hoped that through peer tutoring, students will indirectly be forced to "interact" with a computer and demonstrate to the members in their group what they had learned in the various workshops. Due to the limited length of time that they could meet at one sitting for a variety of reasons, groups found that they needed to meet more than once. Thus, this would indirectly increase the number of times they needed to "interact" with a computer and consequently increase the amount of hands-on experience that the instructors hoped the students would gain through peer tutoring. Peer tutoring seemed to have achieved optimistically in this area as fifteen percent (15%) of the students strongly agreed and fifty percent (50%) agreed that having to demonstrate to their peers had given them more hands-on experience than expected.

Increasing Confidence In Using Computers. Eight percent (8%) of the students strongly agreed and forty-four (44%) agreed that the experience of peer tutoring had made them more confident at using the various computer applications. This factor was considered important as the students were expected to be able to gain the knowledge and expertise in using computer technology when they go out to teach in the future. And this confidence that they gained from peer tutoring in the course is considered one of the major goals in the Educational Media course. Furthermore,

most of the students were computer novices, thus it was anticipated that they come into the course with a certain level of computer anxiety. With a total of fifty-two percent (52%) of the students agreeing or strongly agreeing that peer tutoring had given them more confidence in using technology and only twenty-five percent (25%) who are not sure, it could be concluded that peer tutoring had in one way or another decreased the students' anxiety toward computer technology.

Getting More Practice Of Communicating Ideas. Perhaps the principal value of tutoring in the Educational Media course was the practice it offered in the simple communication of ideas. Seven percent (7%) strongly agreed and fifty-three percent (53%) agreed that peer tutoring provided them with the practice of imparting knowledge and communicating ideas which is an important function in education.

Gaining An Insight Of What The Teaching Profession Involves. A majority of the students, i.e., fifty -three percent (53%) were undecided whether peer tutoring had given them an insight into what the teaching profession involves. This was probably because they were used to seeing and experiencing classrooms which were more traditionally structured, i.e, with the teacher as the expert in the classroom. The peer tutoring experience in the educational media course however required that they played the role of "teacher" as well as "student" and thus, this could have confused them causing indecisiveness as to whether or not they had obtained the insight of the teaching profession. On the other hand, with the amount time and effort spent in teaching and tutoring, the students could also be thinking twice about the teaching profession. However, the fact that six percent (6%) of the students strongly agreeing and twenty-one percent (21%) agreeing that peer tutoring

had given them an insight of what the teaching profession involved showed that the experience of peer teaching had somewhat aroused if not increased their interest in teaching.

Becoming More Interested In The Use Of Technology In Education. One of the goals of having the educational media course for education majors is so that students will be exposed to the various technology particularly computers which they could use when they go out to teach. A total of forty-seven percent (47%) of the students agreed or strongly agreed that peer tutoring had increased their interest in learning more about the uses of technology in education. However, thirty-one percent (31%) were still undecided. This could be related to some of the responses given in questions 24 and 25 (see appendix B) in which most of the students felt that some of their peers were simply too "slow" or didn't have the interest or enthusiasm in learning computer technology. As such, the students who responded to the question pertaining to the use of technology in education were wary that they might run into students in the future who did not have a knack for computers and thus would disrupt their flow of teaching when using technology. Since thirty-one percent (31%) were unsure if they would use technology showed that they probably would like to just play safe and stick to the traditional style of teaching.

Benefits Of Being A Tutee

Class Becomes More Enjoyable. A total of sixty percent (60%) of the students agreed or strongly agreed that peer tutoring had made the class more enjoyable probably due to the fact that the students had enjoyed the non-traditional and informal way of learning in small groups and from each other. From the open-

ended questions, there were complaints that they usually found it difficult to meet due to lack of time or a common time to meet. Despite that, the students on the whole seemed to enjoy the time spent together whenever they got the chance to meet and discuss.

Gaining More Individual Attention. Fifty-six percent (56%) felt that peer tutoring had given them the individual attention that they needed in learning the various computer software. Their responses showed that they felt comfortable being taught by their peers. This could be perhaps the peer tutoring situation had taken some pressure off from their learning unlike in a classroom situation when they were often under the watchful eye or scrutiny of an instructor. With peer tutoring, they knew that everyone was alike and their friends were less judgmental than their instructors might have been.

Developing Better Interpersonal Skills. As expected, the majority, i.e., fifty-two percent (52%) of the students agreed or strongly agreed that peer tutoring had helped them develop better interpersonal skills. This was probably because they were given more opportunity to interact with their peers. In question 21 (see appendix B), most of the students had stated that one of the things they liked most about peer tutoring was the opportunity to be with their friends, to interact with them and to get to know them better.

Reinforced Knowledge Of The Various Computer Skills. As anticipated, sixty-five percent (65%) of the students agreed or strongly agreed that learning from their tutors had helped them reinforce their knowledge of the various computer skills to be learned for the class. This was probably because the tutees were given the

guidance and individual attention that they needed to learn the new technology which they might not have otherwise achieved in a large group session.

Opinions Of Students About Peer Tutoring

The third section of the questionnaire contained five (5) open-ended questions in which students were asked to provide opinions on what they liked most and least about peer tutoring in the educational media course and what suggestions they would make to improve the use of peer tutoring in the course.

What The Students liked Best About Peer Tutoring. 70% of the students who answered the question gave very encouraging comments and most of their opinions fell closely to those listed below.

1. "It was a different experience and I enjoyed helping my friends learn."
2. "It was nice to see the expression on my friends' faces when they knew how to do it too."
3. "I enjoyed the experience of interacting with the members in my group."
4. "It was crazy most of the time but I had fun! "
5. "It was rewarding as I was doing something useful with what I had learned."
6. "We had more attention and the work was explained in a simple way, I think, but I understood anyway."
7. "The tutors who were also our friends were helpful and nice."
8. " I enjoyed the atmosphere of learning as a group."

What The Students Liked Least About Peer Tutoring. Approximately ninety percent (90%) of the students who answered this question lamented the fact that time was their major obstacle in enjoying the experience of peer tutoring in the Educational Media course. The other comments that the students made fell closely to those listed below.

1. "Some member(s) of the group are too slow and tutoring them takes up too much time. "
2. "The people who attend the workshop do not care if the others get their assignments done correctly or not."

The above comments seemed to indicate that some of the "tutors" displayed impatience and had little empathy for their peers learning disabilities. Fortunately, only a small minority felt that way. On the other hand, there were others who felt that some of the tutors were not concerned whether the other members knew how to use the computer applications that they were supposed to teach since they already had their assignment done. This also indicated selfishness on some tutors' part but, again it was directed to a small portion of the population.

How Students Think Peer Tutoring Could Be Improved. By far the most common suggestion from the responses received was "there should be a scheduled time for tutoring within the course ". Most of the students seemed to have the contention that having a scheduled meeting time for them to tutor their friends would be the solution to their time problem. Many of the students suggested that the workshops be held during the first half of the class and the second half be scheduled for tutelage. Other suggestions included "more lab hours", "more computers", "smaller

groups" and that "instructors should have lab hours too." One of the suggestions which seemed most frequent in all of the responses found in the questionnaires was "there should be group projects." This could be suggested in relation to the fact that some tutors were not too overly concerned that their friends did not understand how to use the various software taught as long as they had their assignments done, since the students had to perform individual assignments. Thus, students felt that by having group projects to perform, the tutors will be more responsible and considerate, and this would also encourage the members in the group to be more cooperative.

CHAPTER VI

CONCLUSION AND RECOMMENDATIONS

On the average, students' attitudes toward the use of peer tutoring in the educational course was very positive. Although almost all the students strongly felt that the time factor was against them, they did, on the whole, find the experience of peer tutoring rewarding and helpful in the learning of technology. Since this was the first time that peer tutoring was being used in the course, suggestions and opinions of the students as pioneers to this new method of running the course were considered most important. Overall the students had enjoyed peer tutoring despite running into problems like time or certain members being irresponsible. The students generally found the peer tutoring sessions rewarding and beneficial to their learning in the course. Peer tutoring had helped students reinforce their learning of the various computer technology taught and they had received the individual attention that they needed to be able to learn and use the computer technology confidently and comfortably.

Based on the results of the study, the researcher suggests the following recommendations:

1. Schedule group work sessions during class time to allow students to discuss and work in groups.
2. Assign more group projects to encourage students to learn collaboratively.

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APPENDIX A

ED MEDIA COURSE SYLLABUS

Dr. Bob Muffoletto	Office: SEC 654	Phone: 273-6282
Kathy Klink-Zeitz	Office: SEC 189	Phone: 273-5877
Dr. Leigh Zeitz	Office: PLS 124	Phone: 273-2202
Dr. Sharon Smaldino	Office: SEC 652	Phone: 273-3250

The Course:

Educational Media is a basic course in the planning and use of resources for message development in the classroom or other locations where learning takes place. Students will be exposed to various ways of thinking about educational media and the messages it delivers.

The course is designed to provide the student with experiences which will enable her/him to select, arrange, utilize, and produce a variety of resources using a systems approach to message development.

Requirements:

1. Read assigned sections from textbooks and other materials during the course.

Recommended Texts:

Beekman, G. Hypercard In A Hurry.
Considine, D. & Haley, G. Visual Messages: Integrating imagery into instruction.
Finkel, L., McManus, J., & Zeitz, L. Microsoft works Through Applications:IBM PC Version.
Finkel, L., McManus, J., & Zeitz, L. Microsoft works 3.0 Through Applications: MacIntosh Version.
Provenzo, E. Video Kids: Making sense of nintendo.
Simonson, M., Thompson, A. Educational Computing Foundations.
Teague, Streit, Rogers, Tipling, Media and Technology in the Classroom
Thornburg, D. Education, Technology, and Paradigms of Change for the 21st Century.
Tyner, Comp.Coll. Media and You: An elementary Media Literacy Curriculum

All required reading materials for the course will be available over the VAX computer, on the Ed Media disk, IRTS (SEC222), or will be distributed in class.

2. Learn to operate the various types of audio-visual equipment associated with this course. Video tapes of equipment operation are available in the IRTS Lab (SEC 222). Checkouts or performance procedures will be explained in class. The equipment include: Camcorders,16mm projectors, and slide projectors.

3. Microcomputer experience will be a part of this class. You will need to demonstrate an understanding and knowledge of microcomputer operation. Computers are available in the Education Center in the IRTS Lab (SEC222), and the ISCS Student Computer Lab, SEC 123. Macintosh computers are also available in the Media Center.

4. Students will be required to complete individual requirements as well as cooperative group projects.

5. There will be a Lesson Design Project assignment for this class. You and your group will be required to develop and present this lesson outline to the class using HyperCard and a LCD panel.

6. Class attendance is **REQUIRED** . Many of the aspects of the assignments will be covered in class and workshops. To do a good job on the assignments it is to your benefit to attend class and workshops. Workshops are designed to get you started on many of the assignments. Points will be subtracted for non-attendance.

7. The Ed Media disk (can be purchased from University Book and Supply), and 2 blank 3 1/2 inch double density diskettes will be needed for class.

Grading:
Grading will be based on the following point distribution:

1. Mac Basics/Tour of IBM Quiz	20 points
2. Print Shop	10 points
3. HyperCard Stack	50 points
4. Computer Applications	30 points
5. Instructional Objectives Quiz	30 points
6. Computer/Media Evaluations (Group Grade)	15 points
7. SuperPaint	15 points
8. Media Graphics (Group Grade)	40 points
9. Check Out	10 points
10. CD Rom Search	10 points
11. Lesson Design Group Project	90 points
12. 5 E-Mail Messages	90 points
13. Attendance	40 points
***85% attendance will be required to receive 40 points - All or Nothing.	
Total	450 points

All assignments are due on or before the dates indicated. Your name, section number, and your computer username must be on all items.

There will be opportunities to do extra credit. Watch your E-Mail for information on these.

The following is the point/letter grade scale for the final grade:

430+	= A	350 - 361	= C
418 - 429	= A-	338 - 349	= C-
402 - 417	= B+	322 - 337	= D+
390 - 401	= B	310 - 321	= D
378 - 389	= B-	298 - 309	= D-
362 - 377	= C+	297 - Below	= F

APPENDIX B

SURVEY QUESTIONNAIRE

This is a survey being conducted to find out the students' attitudes about teaching their peers the various computer software learned in the Educational Media workshops. Please answer the questions to the best of your ability. Your responses will be kept confidential and will not in any way affect your grade for the course.

1. How many members are there in your group ?

   ___Three___Four___Five

2. How were the members in your group chosen ?

   ___By the instructor
   ___They were sitting near you
   ___They are your friends
   ___They have the same major as you

Questions 3-12 relate to your experience as a "tutor" in your group. Please circle the best answer.

Strongly Agree	-	SA
Agree	-	A
Neutral	-	N
Strongly Disagree	-	SD
Disagree	-	D

3.	Do you feel comfortable teaching the members in your group ?	SA A N SD D
4.	Teaching the other members in your group has reinforced your knowledge of the various computer software taught ?	SA A N SD D
5.	Demonstrating to the other members in your group has given you more 'hands-on' experience in using the various computer components ?	SA A N SD D

6.	Demonstrating to the other members in your has made you become more confident at using the various software taught ?	SA A N SD D
7.	Teaching your peers has made you less attentive in the computer workshops ?	SA A N SD D
8.	Having to teach your peers has made you more tense in the workshops ?	SA A N SD D
9.	Teaching your peers has provided you with the practice of communicating ideas or imparting knowledge which is relevant to your education major.	SA A N SD D
10.	The experience of teaching in this course has given you an insight of what the teaching process involves.	SA A N SD D
11.	Having to teach your peers made you more interested in learning the uses of technology in education.	SA A N SD D
12.	Teaching your peers has not made more difficult for you to perform the various assignments in the course.	SA A N SD D

Questions 13-17 relate to your experience as a "tutee" in your group. Please circle the best answer.

Strongly Agree	-	SA
Agree	-	A
Neutral	-	N
Strongly Disagree	-	SD
Disagree	-	D

13.	The experience of learning from each other has made the class more enjoyable for you.	SA A N SD D
14.	The information provided by your peer was adequate in helping you understand the various computer applications required.	SA A N SD D

15. Learning from your peers has provided you with the individual attention that you need to learn the computer applications required for the class. SA A N SD D

16. Learning from each other has helped you develop better interpersonal skills. SA A N SD D

17. Learning from your peers has made you more confused. SA A N SD D

18. Learning from your peers has reinforced your knowledge of the various computer applications taught in the course. SA A N SD D

19. Learning from each other has made the course less interesting. SA A N SD D

20. Learning from your peers has made the tasks more difficult to accomplish. SA A N SD D

Please answer all the following questions to the best of your ability.

21. From your experience in this course, what do you like most about teaching your peers ?

_____

_____

_____

22. From your experience, what do you like most about learning from your peers ?

_____

_____

_____

23. From your experience in this course, what do you like least about teaching your peers ?

_____

_____

_____

24. From your experience, what do you like least about learning from your peers ?

_____

_____

_____

25. From your experience in the course, what suggestions would you make to improve the use of peer teaching ?

_____

_____

_____

_____

--Thank You--