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An Experiment in Discovery Learning

Juanita Nicholson

Ouachita Baptist University

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Nicholson, Juanita, "An Experiment in Discovery Learning" (1968). *Honors Theses*. 466.
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AN EXPERIMENT IN DISCOVERY LEARNING

A Special Study
presented to
the Honors Program
Ouachita Baptist University

#155

by
Juanita Nicholson
January, 1968

In recent years new attitudes toward how people learn have been greatly expanded and developed. These new thoughts have been utilized in the area of music education as well as other areas of education. New methods of piano instruction are but one facet of the change in music education, and this is the area which I have undertaken to explore.

During the summer of 1968, Dr. Guy Duckworth, professor of piano at Northwestern University, held a piano workshop at Ouachita Baptist University, during which he explained and demonstrated his method of teaching which he refers to as Discovery Learning.

In an article about the controversy over Discovery Learning, Dr. Duckworth contrasts it with Receptive Learning. The main difference is that in Receptive Learning the student is presented with certain information (usually in its final form) to be learned and then is expected to "fit" this information into past experiences. The student begins on a passive level and is then asked to take an active role.

In Discovery Learning, on the other hand, the student's role is active from the very beginning. For example, at a beginning piano lesson for a child, a problem or course of action is presented that is likely to interest him--perhaps improvising a melody for a nursery rhyme. By actually becoming involved and "exploring the keyboard" himself, the child discovers certain principles and concepts. Some of these might be: "Musical sound often consists of different pitches;" "Some sounds are longer than others;" "The relationship of pitches to one another is important."*

"The teacher asks questions, accepts feelings, uses all responses whether they are right or wrong, encourages, and rewards his students."* "Receptive Learning is for gaining information; Discovery Learning for conceptualizing."*

However, Dr. Duckworth also points out that Discovery Learning and Receptive Learning are not mutually exclusive. There are times when both types of experience can be used. "If the subject matter is facts regarding a composer's life, Receptive Learning is obviously the only choice....On the other hand, if the subject matter is the ...pervading spirit of a period, some kind of Discovery Learning must take place."*

Discovery is more effective in group situations. "...the presence of others at the same level of sophistication and ability will more thoroughly help each student pursue his discoveries, acquire new ideas according to 'fitness,' and generalize about them."* This idea is reiterated by Dr. Robert Pace, professor of music education at Teachers College, Columbia University, "Students learn more quickly from one another than from a teacher alone."**

In September of 1968 I undertook to teach piano lessons for the first time. I acquired four students, three of which had had some previous training (under another college student) and one beginner. The three students (one grade-school girl, one junior-high girl, and one adult woman) I kept in their various studies-- John Thompson, John Schu' r, scales, etc. The beginner, a third-grade boy named Jeff, I decided to try with Dr. Duckworth's method.

The first book in this method is called "Keyboard Explorer." Jeff and I both became explorers. The object of the book at first is to get the student to feel rhythm by chanting, walking, marching to certain nursery rhymes. Then the student improvises melodies to fit the rhymes. He gradually learns such thing as: 1) melody consists of steps, skips and repeats; 2) there is a basic beat that stays the same (as when we are marching) while the words to a rhyme or song form a rhythm which is not always even. Sometimes the rhythmic values are longer,

sometimes they are shorter, sometimes "jerky", sometimes very even (just like the beat); 3) the same melody can be played in different places on the keyboard and still sound basically the same (i. e., learning to play in different keys).

The student also learns more factual information such as the terms arpeggio (the first, third and fifth note of a given key, such as C major) and pentachord (the first five notes of any given key). If asked to find the pentachord in a new key, he could find it eventually by trial and error because he knows how it should sound.

In trying to reach these objectives with Jeff, I no doubt have made many mistakes. I feel handicapped by not having a group to work with in using Dr. Duckworth's method, but even with one student the method is most worthwhile. Of course, a definite handicap (perhaps more Jeff's than mine) has been my own lack of knowledge of the method and experience in using it, but Jeff and I have marched, clapped, chanted, sung and generally learned a great deal about music.

At first (and even yet to some extent) I had trouble getting Jeff to keep a steady beat. But I now realize that Jeff is only a third-grader and physically of small stature, so I can only hope that he now has the correct concepts and that coordination problems will work themselves out.

I also felt that Jeff was limited by the fact that he cannot always sing the pitch he is playing, and I was afraid that he lacked a good sense of pitch. But he generally can tell when he has played a "wrong" note, so perhaps it is too early to judge about this and with experience he will be able to match pitches better.

My main problem in trying to teach Jeff by Dr. Duckworth's method is to keep from saying, "No, you do it this way!" Too many times he has watched my reactions to find out how he was doing rather than listening and judging for himself.

I cannot help but to compare Jeff's reactions to those of my other three students who dislike scales and hate Hanon with a passion. Jeff has much more fun!

Jeff has not reached the point where he is actually reading music, but much of this knowledge he gained previously in school. Therefore, when asked to make up his own melodies for a particular rhyme for his next lesson, he returned the melodies written on staff paper. The rhythm was sometimes notated wrong however, and he wrote one of his melodies in the key of D and played it in C. But when I asked him to play it in A, G, D, Db, and Ab, he did so gladly. Should I complain because he didn't write it in C major? I think not.

*Guy Duckworth, "Discovery Learning in Piano Instruction," Music Educators Journal, (February, 1968).

**J. A. Mason, "The New Dimensions in Music Lessons; Group Teaching," House Beautiful, 109 (February, 1967), 150.