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ABSTRACT

This study examined the variations in the modes of presenting classroom lessons by special education and regular elementary teachers in four rural Louisiana schools. Questionnaires were sent to 114 elementary teachers, including 27 special education teachers and 87 regular teachers. Questions covered classroom presentation of language arts, mathematics, science, and social studies. Eight statements asked teachers how often they provided students with opportunities to learn in the following ways: (1) visual means; (2) auditory means; (3) movement and gestures; (4) manipulatives; (5) music; (6) working alone; (7) working with a partner; and (8) working in a group. Except for working alone, special education teachers used all of the modes of presentation more frequently than regular elementary teachers. Both groups failed to use music to expected levels in the presentation of the four subject areas. Regular teachers also failed to use movement and to work with a partner in science and social studies activities. Although presentation modes involving music, movement, and manipulatives are known to improve student's attention, retention, and retrieval of information, they were underutilized by the teachers. To accommodate all learning styles, regular elementary teachers need to incorporate additional methods of teaching and learning. Increased attention by teachers to modes of presentation may help all learners regardless of their learning potential. A table giving the statistical results of the questionnaire survey is included. (LP)

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Rhythm and Blues: Enhancing Learning Through Movement and Music

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Rhythm and Blues:
Enhancing Learning Through Movement and Music

(A Look at the Modes of Presentation
of Special Education and Regular Elementary Teachers
in a Rural School District in Louisiana)

Paper presented at the
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Rhythm and Blues: Enhancing Learning Through Movement and Music

Children vary greatly in the way they perceive and interact with the world and when applied to learning, this is their personal learning style. The styles movement fits in with a "personalized" view of education appropriate to an increasingly diverse student population. While some research (Armstrong, 1987; Barbe, 1985; Carbo, 1990; Dunn & Dunn, 1987) indicates that teaching children through their personal learning style results in improved attitudes towards school, a decrease in behavior problems, and improved test scores; other research (Doyle & Rutherford, 1984; Kavale & Forness, 1987; McCarthy, 1990; O'Neil, 1990; Snider, 1990) indicates that the key to effective instruction is to present material through multiple approaches. Since children are all different, a single way of teaching would limit learning.

At-risk or mildly handicapped children have much to gain from style based learning. Because a lack of alternatives to traditional lecture and textbook based teaching would work against handicapped learners, differentiated instruction that takes advantage of student learning strength is widely used in special education.

In Howard Gardner's (1983) discourse on the theory of multiple intelligences, he identifies seven intelligences that each person possesses in varying degrees. These seven intelligences are: spatial or the ability to think in images and pictures, linguistic or highly developed auditory skills, bodily-kinesthetic or processing information through bodily sensations, logical-mathematical or highly abstract thinking ability, musical or the ability to think and remember with music, intrapersonal or intuitive ability, and interpersonal or ability to communicate with others. The additional area of the ability to work with a partner has been added to this study.

The purpose of the present study was to identify how frequently special education and regular elementary teachers vary the mode of presentation in their lessons. The research questions addressed were:

1. How frequently are the various modes of presentation used in each of the four subject areas by special education teachers?

2. How frequently are the various modes of presentation used in each of the four subject areas by regular elementary teachers?
3. Is there a significant difference between the amount of time spent in each mode of presentation in each of four subject areas among special education and regular elementary teachers?

Methodology

Sample

The sample for the study was limited to K-6 grade teachers from four schools in a rural school district in Louisiana. A questionnaire was given to 114 elementary teachers. Twenty-three percent or 27 were special education teachers and the remaining 87 taught in traditional elementary classrooms.

The range of teaching experience was from 0 to 39 years with the most frequently reported number of years teaching experience being ten years. Seventy-five percent of the teachers had bachelors degrees while the remaining had masters degrees or masters degrees with additional coursework.

Instrumentation

A two section questionnaire was developed specifically for the data collection activities of this study. The first section requested demographic data including grade level taught, subject area(s) taught, years of teaching experience, and highest degree held. The second section consisted of eight statements about modes of presentation which could be implemented in language arts, mathematics, science, and social studies lessons. The eight statements asked teachers how often they provided opportunities for students to learn in the following ways: by including pictures, charts, or other visuals; by saying and hearing; through gestures and movement; by providing manipulatives; with music, rhythm, or melody; by working alone; by working with a partner; and by working in a group. Teachers were asked to rate the frequency of use of these modes of presentation in each subject area on a Likert type scale. The categories ranged from never to very frequently.

Analysis and Findings

Data were treated descriptively for the purpose of this study. Frequencies and percentages were used to report the data in section one of the questionnaire and the mean and standard deviation of the Likert type response for each of the items were reported. Differences in frequency of presentation modes between special education and regular elementary teachers were analyzed through the use of t-tests.

Question One. Special education teachers were asked to rate the frequency of use of eight modes of presentation in each of four subject areas. A summary of these ratings is found in Table 1. The table indicates that 10 items received a rating higher than 4.5 and are used very frequently in lessons. These items are use of visuals, auditory means, and cooperative learning in language arts; use of auditory means and manipulatives in mathematics; use of visuals, auditory means, and manipulatives in science; and use of visuals and auditory means in social studies. Eighteen items received a rating between 3.5 and 4.5 and are implemented frequently in lessons. These items are the use of movement, manipulatives, working alone, and working with a partner in language arts; use of visuals, movement, working alone, working with a partner, and cooperative learning in mathematics; use of movement, working alone, working with a partner, and cooperative learning in science; and use of movement, manipulative, working alone, working with a partner, and cooperative learning in social studies. The remaining four items received a rating between 2.5 and 3.5. These items, use of music in language arts, mathematics, science, and social studies, are sometimes used in lessons.

Question Two. Regular elementary teachers were asked to rate the frequency of use of eight modes of presentation in each of four subject areas. A summary of these ratings is found in Table 1. This table indicates that 4 items received a rating of higher than 4.5. These four items, use of auditory means and working alone in language arts and use of auditory means and working alone in mathematics, are used very frequently in lessons. Twenty items received a rating between 3.5 and 4.5 and are used frequently in lessons. These items are use of visuals, movement, manipulatives, working with a partner, and cooperative learning in language arts; use of visuals, movement, manipulatives, working with a partner, and cooperative learning in mathematics; use of visuals, auditory means, manipulatives, working alone, and cooperative learning in science; and use of visuals,

auditory means, manipulatives, working alone, and cooperative learning in social studies. Five items received a rating between 2.5 and 3.5 and are sometimes used in lessons. These items are use of music in language arts; use of movement and working with a partner in science; and use of movement and working with a partner in social studies. The remaining three items received a rating between 1.5 and 2.5. These items are use of music in mathematics, science, and social studies and are seldom used in lessons.

Question Three. The final question addressed by this study sought to determine whether differences in frequency of use of modes of presentation occur between special education and regular elementary teachers. Data were reported to show the relationship between special education and regular elementary teachers responses.

A relative comparison among the mean scores of special education and regular elementary teachers is shown in Table 1. Twenty-eight items received higher mean ratings by special education teachers and fourteen of these ratings were found to be significantly different from one another. These modes of presentation were found more frequently in the special education classroom than in the traditional classroom. The ratings were statistically significant for the visual category in language arts, science, and social studies; for the auditory category in language arts, science, and social studies; for the movement category in mathematics; for the manipulatives category in all four subject areas; and for the music and rhythm category in mathematics, science, and social studies.

Four items received higher mean ratings by regular elementary teachers and all were found to be significantly different from one another. The mode of presentation found more frequently in the regular classroom than in the special education classroom was working alone in language arts, mathematics, science, and social studies. No significant difference was found in the categories of working with a partner or cooperative learning when special education and regular elementary teachers were compared.

Conclusions

Special education teachers used all of the modes of presentation more frequently than regular elementary teachers except that of working alone. Both groups failed to use music to expected levels in language arts, mathematics, science, and social studies and regular elementary teachers surprisingly failed to use movement and working with a partner in science and social studies. As

variety of modes of presentation are decreased in the classroom, teachers run the risk of reaching fewer and fewer students. Thus, the most direct effect may be an increase in the drop out rate and failure to reach the at-risk learner.

Research has strongly shown that attention to learning style greatly enhances learning (Dunn, Beaudry, & Klavis, 1989). This study adds evidence that special education teachers focus attention to learning style by utilizing a multi-sensory approach of presentation to a greater extent than regular elementary teachers. This knowledge seems to be an integral part of teacher training of special education teachers.

Since all learners learn better through utilization of learning styles, it seems reasonable to assume that regular elementary teachers need to incorporate additional modes of teaching and learning with their daily lesson plans. Gregorc and Ward (1977) further propose team teaching and grouping teachers of different learning styles in order to reach the learning potential of children. Utilizing all modes enables both rapid learners and slower learners to maximize their learning experiences.

Although extensive work by Slavin (1983, 1987) indicates that cooperative learning and dyadic teams enhance student learning and attitude towards learning, these findings do not seem to have permeated to the practitioner level. Regular classroom teachers by and large do not present lessons that require cooperative work and generally restrict cooperative work to non-academic projects.

Perhaps large class size would prevent regular classroom teachers from utilizing group learning as much as that shown by special education teachers. Special education classes with limited enrollment seems to be better suited to facilitate group learning within this arrangement.

Presentation modes involving music, movement, and manipulatives are underutilized in the classroom. Guidelines based on information processing theory (Ellis & Hunt, 1989; Gagne, 1985) describe ways to enhance students' attention, retention, and retrieval of information. Many of these guidelines incorporate music, movement, and manipulatives in the classroom. Even though these guidelines are available in the literature, the information may not have filtered down to the classroom level. Increased attention by teachers to modes of presentation has the potential to help all learners regardless of their learning potential.

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Table 1

Comparison of Ratings Between Regular Elementary
Teachers and Special Education Teachers

Item	Spec. Means	Reg. Means	T-Value	df
Visual				
Lang.	4.66	4.13	2.53**	106
Math	4.30	4.04	1.19	104
Sci.	4.53	4.02	1.93*	92
SS	4.62	4.10	2.26*	97
Auditory				
Lang.	4.95	4.73	2.03*	106
Math	4.78	4.57	1.30	104
Sci.	4.76	4.29	2.01*	92
SS	4.81	4.33	2.40*	97
Movement				
Lang.	4.08	3.65	1.70	102
Math	4.08	3.58	1.98*	103
Sci.	3.91	3.41	1.50	89
SS	3.87	3.42	1.60	94
Manipulatives				
Lang.	4.17	3.62	2.07*	104
Math	4.65	4.12	2.35*	104
Sci.	4.53	3.70	2.65**	92
SS	4.18	3.54	2.33*	96
Music				
Lang.	3.13	2.72	1.30	104
Math	3.09	2.48	1.96*	104
Sci.	3.41	2.16	3.88***	91
SS	3.26	2.40	2.71**	95
Alone				
Lang.	3.79	4.60	-4.61***	106
Math	3.86	4.63	-4.63***	104
Sci.	3.61	4.25	-2.46*	92
SS	3.62	4.21	-2.42*	96
Partner				
Lang.	3.79	3.64	0.66	106
Math	3.69	3.61	0.35	104
Sci.	3.53	3.39	0.46	92
SS	3.62	3.39	0.93	96
Group				
Lang.	4.50	4.02	1.90	106
Math	4.26	3.83	1.71	104
Sci.	4.15	3.69	1.49	92
SS	3.87	3.76	0.37	96

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.