

AN INVESTIGATION OF FIFTH GRADERS REPORTED
READING STYLE PERCEPTUAL PREFERENCES
AND READING ACHIEVEMENT

THESIS

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Abstract

One hundred twenty-one fifth grade students attending a rural public school and of a mixed socioeconomic and academic background were surveyed to determine their perceptual reading style preferences. The Reading Style Inventory (RSI) was used to obtain the perceptual preferences the subjects preferred during reading activities.

Reading Achievement scores were obtained from the results of the Stanford Achievement Test, administered in May of the subjects fourth year.

The study was designed to determine if there was a significant relationship between the reported preference in the reading style element of perception and the reading achievement of above average, average and below average fifth grade students.

A significant relationship was found between the fifth graders reported preference for learning auditorially and their reading achievement. Some trends were evident in the perceptual categories of visual, tactile and kinesthetic learning.

Students in the above average and below average reading achievement groups had the greatest impact on whether or not a relationship was found or a trend indicated.

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Chapter I

Statement of the Problem

Purpose of the Study

The purpose of this study was to determine if a significant relationship exists between the reported preference in the reading style element of perception and the reading achievement of above average, average and below average fifth grade students.

Questions to be Answered

This study attempted to answer the following questions:

Is there a significant relationship between the reported preference in the reading style element of perception and the reading achievement of above average fifth grade students?

Is there a significant relationship between the reported preference in the reading style element of perception and the reading achievement of average fifth grade students?

Is there a significant relationship between the reported preference in the reading style element of perception and the reading achievement of below average fifth grade students?

Need for the Study

Throughout the late 1960's and continuing into the 1970's a trend, evident in the literature was the examination of preferred modalities

and their relationship to the teaching of reading. This research has provided a base for the development of learning style characteristics and ultimately, reading style characteristics.

Much of the early research on matching modality preference and reading treatment contained methodological flaws. These include the use of incorrect and/or unreliable instruments, insufficient differentiation between/among groups or methods, and inadequate controls, which can negate significant results (Bracht, 1970; Cronback & Snow, 1977; Ysseldyke, 1973 as cited by Carbo, 1983c; Daniel & Tacker, 1974).

In a study by Daniel and Tacker (1974), "it was concluded that a child's preference for modality of stimulus is an important variable which influences learning" (p. 257). It was suggested in early research that in order to investigate the importance of modality preference "there exists a need for a rapid and reliable screening test for the identification of children with strong modality preference" (p. 257). Dunn and Dunn's Learning Style Inventory (LSI) and Carbo's Reading Style Inventory (RSI) attempt to fill this recommendation. The use of these instruments and sound methodological practices in current research has attempted to substantiate the findings of early research.

Dunn (1983) states that "most children not only can tell you how they learn, they want to and are delighted that you asked" (p. 60). Contrary to these findings, Barbe and Milone (1981) found that fewer than one-half of those tested in their study could identify their

modality strengths. They feel that "with individuals who are sufficiently perceptive to observe their own behaviors objectively the preference approach is useful" (Barbe et al., 1979, as cited by Barbe & Milone, 1981, p. 489).

It is evident that the controversy concerning early research methodology may be continuing today.

Definitions

Reading Style: The conditions under which a student is most likely to read easily and with enjoyment; an individual's learning style when he/she reads.

Learning Style: The conditions under which a child learns best.

RSI: Reading Style Inventory (Carbo, 1983).

LSI: Learning Style Inventory (Dunn, Dunn & Price, 1975).

Reading Style Element--Perception:

- a. Visual b. Auditory c. Tactual d. Kinesthetic

Preference: Describes the manner in which a youngster likes to learn.

Strength: Indicates an ability or skill possessed by the student.

Above Average: Those students whose Stanford Achievement Test results were one-half a standard deviation or more above the mean.

Average: Those students whose Stanford Achievement Test results fall within the range of: plus or minus one-half a standard deviation from the mean.

Below Average: Those students whose Stanford Achievement Test results were more than one-half a standard deviation below the mean.

Summary

Initial research has shown that as children become older, there is a progression toward a more independent, visual/auditory learner. Questions have been raised as to what reading style characteristics describe good and poor readers at various ages, and what other variables may affect their learning motivation to read. Answers to these questions may help to make our reading programs more effective.

"Considering that most students enter school with an enthusiasm for learning to read and that many become progressively less motivated to read, it is imperative that educators continue to research this area" (Carbo, 1983b, p. 59).

Chapter II

Review of the Literature

Purpose of the Study

This study was proposed to examine the relationship between reading achievement and the reported reading style element of perception for above average, average, and below average fifth grade students. The visual, auditory, tactual and kinesthetic perceptual preferences and reading achievement were the key variables of this investigation.

A review of related literature includes the topics of: preferred modalities and sensory dominance, an introduction to learning and reading style, the importance of perception, mismatching learning style with teaching method, and an overview of additional RSI elements.

Preferred Modalities--Sensory Dominance

A topic prevalent in the research of the late 1960's and the early 1970's was that of preferred modalities or sensory dominance. Researchers worked to define the senses that children predominately used for learning in order to apply this knowledge to the teaching of reading and the development of reading programs. Suchman and Trabasso (1966), as cited by Daniel and Tacker (1974) reflect the ideas of this period. They stated that:

Recent research on children's preferences for stimulus input both within a sensory modality and between sensory modalities (Wepman, 1968) has demonstrated that such preferences do exist; further, when stimulus presentation is in a preferred mode or dimension, learning is facilitated. (p. 255)

The goal at this time was to identify the senses through which children learned to read readily. A great deal of time was spent working to identify whether auditory, visual or auditory/visual integration was the approach that contributed to the success or failure of good and poor readers.

Bakker (1966) found that the difference in sensory dominance between normal children and dyslexics or "backward readers" occurred in visual rather than kinesthetic sensitivity (p. 1058).

Adams (1978) found that learning disabled children with cerebral dysfunction performed more poorly than their neurologically intact counterparts on a visual form recognition task after receiving training in that modality. He went on to report that adding tactual input to the training did yield visual form recognition by learning disabled children comparable to those without cerebral dysfunction. Adams (1978) attributed the neurological status of the learner as affecting the effectiveness of presenting information in one modality over another. Although he does conclude that for learning disabled as well as normal children visual form recognition appears to me more efficient than tactual form (p. 19).

Beery (1967) concluded that "the ability of dyslexic children to make comparisons between auditory and visual stimuli was significantly inferior to that of the average readers" (p. 832).

Birch and Belmont (1965) investigated auditory--visual integration, intelligence and reading ability. They concluded that reading, in the early grades, seemed to be more related to auditory--visual integration than to intelligence. They continue by stating that as a child becomes older, the auditory--visual integration function stabilizes and is no longer a significant factor in reading competence.

Studies examining the difference in sensory dominance in good and problem readers led to the investigation of instructional programs that rely on presenting information primarily through one sensory mode. Bursuk (1969), upon examining two remedial reading instructional programs, an aural--visual approach and a visual approach, found "when a sensory modality learning preference is not considered, a combined aural--visual approach is more effective than a predominantly visual approach for improving reading comprehension of adolescent readers" (p. 2370-A).

Based on findings such as these, educators may be inclined to place children in reading programs based solely on their preferred modality strengths. Foster, Reese, Schmidt and Ohrtman (1976) state that it is premature to do this as the research in this area has had the following limitations: the failure to demonstrate significant disordinal interaction, the use of artificial treatment procedures and the failure to include a multimodal approach.

Despite this caution, research has shown that it is "advantageous to learn and be tested in the same modality" (Farr, 1971, as cited by Dunn, 1983, p. 60).

Daniel and Tacker (1974) summed up the trend of this period. They stated:

The goal has been determining the best modality for stimulus presentation rather than emphasizing the use of a method appropriate for children who either learn better through preferred rather than nonpreferred modalities or are handicapped in learning through nonpreferred modalities. It should be noted that even in individuals with extreme modality preferences, the existence of the preference does not insure that learning will be through the preferred mode. (p. 255)

Learning and Reading Style

The wealth of research conducted on modality preferences provided a foundation for learning style and ultimately reading style research. Early research suggested that students learn in different ways although they were often all taught through one approach. The research on learning and reading styles expands this traditional view by providing information as to how to adapt instruction to meet the differing needs of students thereby allowing them to achieve their fullest potential.

The Importance of Perception

Carbo (1983c) states that "initial comparative research of good and poor readers demonstrates that those two groups differ significantly on a number of elements of learning style particularly perception, motivation, persistence, responsibility, structure, design, time of day and hemispheric preference" (p. 490).

Carbo (1983b) reports that: perception appears to be the reading style element of greatest importance. Research has demonstrated that reading performance is strongly related to perceptual abilities and that good readers prefer to learn through their visual and auditory modalities, whereas poor readers prefer learning tactually and kinesthetically. (p. 56)

Analysis of the perceptual element showed younger children and poorer readers preferred to learn tactually and/or kinesthetically, while older children and good readers tended to be more visual and auditory. As the children progress through the grades their visual strengths develop and it is not until grades five and six that auditory strengths emerge (Price, 1980).

When primary aged students were instructed according to their preferred perceptual learning style (auditory, visual or visual-tactile), their performance on reading tasks improved (Carbo, 1983c; Carbo, 1980).

Carbo (1980), in her study of kindergarteners, separated the subjects according to their visual and auditory abilities. The children were then placed in three modality groups, visual, auditory, or no preference and randomly assigned to one of three modality treatments. Carbo's results showed that when children were taught through their modality strength, performance on word recall was increased.

Carbo (1983c) also states: that good readers prefer to learn through their visual and auditory modalities, whereas poor readers have higher preferences for learning tactually and kinesthetically. Also poor readers have difficulty shifting between and integrating auditory and visual stimuli. (p. 487)

The importance of identifying students' perceptual modality preferences has shown to be extremely important in providing the optimal learning environment for children learning to read. As youngsters grow and their perceptual preferences mature and develop, their learning situations should reflect these perceptual developments.

Bursuk (1969) as cited by Carbo (1983b) states that an increasing number of studies support the hypothesis that "reading achievement is improved significantly when students are taught to read through their perceptual strengths" (p. 56).

Mismatching Learning Style with Teaching Method

Traditionally all students have received instruction through one mode or teaching method. For those students experiencing

difficulty in learning the matching of learning or reading style to instructional method may make the difference in their academic performance. Cheyney (1974) concluded that teachers of learning disabled students with severe reading problems would benefit from determining their students' learning styles before selecting a teaching method to use in introducing reading.

These students with learning problems in the regular classroom are often placed in remedial situations where the method of instruction remains the same. Therefore the cycle of failure for these students is reinforced. It has been suggested that a child's inability to adapt to the teacher's style/teaching method or the environment may lead to learning disabilities that are actually created by the educational system (Gregorc, as cited by Fiske, 1981). Price (1982) stated that "It is clear that students with learning disabilities have different learning style preferences than do students without learning disabilities" (p. 5).

"An individual whose reading style is mismatched can feel extremely tense and even physically ill while reading. Frustration and anxiety actually prevent the brain from learning" (Carbo, 1984, p. 22). She also states:

The tragic mismatching of reading programs and individual learning styles hinders learning, causing many youngsters to struggle, become frustrated and fail. As a result, thousands of students develop an aversion to reading, undergo years of extensive and costly remediation and too often drop out of school. (Carbo, 1982, p. 126)

Carbo (1982) observed "when a student's educational program and learning style are mismatched for a prolonged period of time, the impact on that student's ability to learn may be profound indeed, causing failure, defeat, embarrassment, and anger" (p. 127).

It may be the mismatching of educational programs and learning styles that is responsible for the measurably more negative attitude to school and learning that is evident with each advancing year (Carbo, 1983b). This deteriorating attitude may be the result of repeated failure and frustration that results in a decreased self-concept. Carbo (1983c) reports that "research has demonstrated the profoundly negative effect of reading failure on youngster's self-concept and school career" (p. 486).

Eight LSI variables accounted for a significant difference between those subjects having a high self-concept and a low self-concept. According to Carbo (1983c), those items included: prefers quiet and cool temperature, is adult-motivated and teacher-motivated, is persistent, prefers learning in several ways, is auditory and needs mobility.

Children with high self-concept prefer "quiet, like to study in warm temperatures, are adult and teacher motivated, are persistent, prefer to learn in several ways, do not have auditory preferences and do not need mobility" (Dunn, Price, Dunn & Saunders, 1979, p. 157). Students with low self-concept prefer "to study or learn with sound/music or the interaction of others, where it is cool, are neither adult nor teacher-motivated, are not persistent, prefer not to

learn in varied ways, have auditory preferences and need mobility" (Dunn, Price, Dunn & Saunders, 1979, p. 157).

Students need to be aware of their learning styles in order to make intelligent decisions regarding instructional options available to them. Students with a high self-concept and an awareness of their personal learning style should be able to function well in an individualized program. A student's confidence and achievement may be related to his/her self-concept (Dunn, Price, Dunn & Saunders, 1979). Tallmadge, Kasten and Shearer (1969) as cited by Dunn, Price, Dunn & Saunders (1979), reported that "although self-esteem is not an element of learning style, it would seem to be one of its noncognitive correlates" (p. 156).

An Overview of Additional RSI Elements

A review of the RSI Research reveals that selected elements can be observed for children at various ages and performing at a range of competencies.

"Selected learning style characteristics can be used as predictors to identify early those students who are likely to become good readers, namely those who are persistent, responsible, self-motivated and those who do not prefer to learn tactually or kinesthetically" (Price, Dunn & Saunders, 1981, p. 224).

Based on the LSI and RSI, poor readers tended to be strongly tactual/kinesthetic. They tended to prefer dim light, an informal design and required high intake and mobility. Poor readers also

tended to have difficulty learning in the morning--when most reading instruction is scheduled (Carbo, 1984; Carbo, 1983a; Price, Dunn & Saunders, 1981). Below average readers are significantly less self-motivated, prefer fewer choices, have fewer visual and auditory strengths than average to above average readers, and have similar strengths and preferences for perception, intake and mobility as young children (Carbo, 1983a).

When the RSI was administered to 293 students in grades two, four, six and eight they differed significantly on ten reading style elements: perception, motivation, structure, reading with adults and peers, intake of food and drink, time of day and mobility (Carbo, 1983b). Younger students and below average readers were found to share many of the same preferences, specifically tactual/kinesthetic preferences, and the need of high intake and mobility (Carbo, 1982).

Students, of various ages and ability levels, were found to have different preferences for specific RSI elements, and some trends were evident.

Examination of the time of day element showed that the older the student, the greater the preference for reading in the evening, while younger children had a greater preference for reading in school (Carbo, 1983b). Reading is often scheduled early in the morning. In Carbo's (1983b) study, only 28 percent of the students in grades two, four, six and eight preferred to read at that time.

"An overwhelming majority of students in the RSI study (86%) preferred to read in an informal area for at least part of the day" (Carbo, 1983b, p. 58). Price, Dunn and Saunders (1981) state that "preferring an informal environment may be one manifestation of a student's lack of readiness for formal learning situations . . ." (p. 225).

Investigation of the element, light, shows that "students have read significantly better when the amount of sound and/or light matched their learning style preferences as identified by the LSI" (Carbo, 1983c, p. 490). In addition, "students preferring dim light read faster and more accurately in dim rather than bright light. The converse was true of youngsters preferring bright light" (Krimsky, 1982 as cited by Carbo, 1983c, p. 490).

Summary

The research of the 1960's and 1970's concerning preferred modalities and the more recent research into student learning and reading styles has provided a solid foundation for teaching children through their individual modality strengths.

A review of the literature has also shown that neglecting to address the modality strengths of our students can lead to negative learning experiences that affect attitudes, self-concept and the acquisition of basic reading and academic skills.

Chapter III

Design of the Study

Purpose of the Study

This study examined the relationship between reading achievement and the reported reading style perceptual preferences: visual, auditory, tactual and kinesthetic, for above average, average and below average fifth grade students.

Hypotheses

1. There is no significant relationship between the reported preference in the reading style element of perception: visual and reading achievement for above average, average and below average fifth grade students.
2. There is no significant relationship between the reported preference in the reading style element of perception: auditory and reading achievement for above average, average and below average fifth grade students.
3. There is no significant relationship between the reported preference in the reading style element of perception: tactual and reading achievement for above average, average and below average fifth grade students.
4. There is no significant relationship between the reported preference in the reading style element of perception: kinesthetic

and reading achievement for above average, average and below average fifth grade students.

Methodology

Subjects

The subjects of this study were 145 fifth grade students attending a rural public school in Western New York. The pupils were members of six separate classrooms representing a mixed socioeconomic and academic population. Twenty-four students were eliminated from the study due to the fact that either reading achievement or reading styles scores were not available. The final total number of subjects participating in the study was 121.

Instruments

The Reading Style Inventory (RSI), published by Learning Research Associates (1983), was used to determine students' perceptual preferences when engaging in reading activities. This untimed inventory requires the students to choose the statements that best describe their feelings, attitudes and behaviors in reading situations.

The inventory is divided into two parts. Part One, consisting of twenty-six questions, presents statements dealing with environmental, emotional and sociological stimuli. Part Two consists of 25 questions pertaining to the physical stimuli of perception. Each part presented a sample question as a clarification of the directions which stress: there is no right or wrong answers, just those that describe the subject.

The RSI was normed in 1981 with two hundred and ninety-three students in grades two, four, six and eight. The sample was drawn from inner city and suburban schools in New York City and Nassau County, New York.

Test-retest reliability coefficients for the RSI subscales ranged from .67 to .77. With particular interest to this study, the test-retest reliability coefficients for the subscale Perception were: Auditory - .74, Visual - .77, Tactual - .69, and Kinesthetic - .75.

Reading achievement scores were obtained from the results of the Stanford Achievement Test, administered in May of the subjects fourth year.

The Reading Styles Inventory was administered in February of the subjects fifth year.

Procedure

A pre-testing session was conducted by this examiner with each of the six classroom groups involved in the study. This fifteen minute meeting was designed to explain the purpose of the study to the students and to orient them to responding to inventories. Sample questions, provided in the RSI manual, were used to orient the children to the types of questions they were to answer. Each of the pre-sessions, with the exception of one, was conducted one day prior to the administration of the RSI. Due to scheduling difficulties, one pre-session was held immediately prior to the administration of the RSI. As outlined in the RSI manual, either procedure would be acceptable.

The RSI was administered by this researcher in a group setting. Subjects were provided with RSI inventories, answer sheets and pencils. The inventory was administered following the reading of the directions and discussion of the sample statement. Also, the terms "pep" and "obedient" were defined for students as they were found to be unfamiliar vocabulary to many of the students.

Questions and clarification were addressed by the examiner on an individual basis.

The completed inventories were computer scored by Learning Research Associates, Roslyn Heights, NY. Computerized Reading Style Inventory profiles were received approximately two weeks after submitting them for scoring.

Students were identified as being above average, average or below average readers on the basis of their SAT scores.

Once grouped, the data were examined to determine if above average, average, or below average fifth grade readers exhibited a perceptual preference for reading.

Statistical Design

A Chi-square test of independence was calculated for the four areas of perception outlined in the Reading Style Inventory: Visual, Auditory, Tactual, and Kinesthetic.

Summary

One hundred twenty-one fifth grade students representing above average, average and below average reading achievers were tested

with the RSI in order to determine their perceived perceptual preferences for reading and reading situations. Comparisons were then made between the three groups of readers using a Chi-square test of independence.

Chapter IV

Analysis of Data

Purpose of the Study

The relationship between the reported preference in the reading style element of perception and the reading achievement of above average, average and below average fifth grade students was examined in this study.

Findings and Interpretations of Data

The Chi-square test of independence was employed for analysis of the data as the purpose of this research was to examine relationships between three distinct groups of students in terms of their reported preferences in the reading style element of perception.

Each of the four areas of perception: visual, auditory, tactual and kinesthetic has four variables. For example, the kinesthetic and tactual perceptual element includes a (1) strong, (2) moderate, (3) mild, or (4) no preference category for these types of learning. The auditory and visual perceptual elements report their preferences as being (1) excellent, (2) good, (3) mild, or (4) no preference. Because of this type of reporting, the above average, average and below average fifth graders' responses were examined using the Chi-square statistic for each of the four perceptual groups to determine

if a significant relationship existed between reading achievement and that perceptual element.

The null hypothesis for each of the four perceptual areas was stated as follows: There is no significant relationship between the above average, average and below average reading achievement of fifth graders and the intensity of the preference for the perceptual area in question.

The Stanford Achievement Test (SAT) data from the 121 students involved in the study were initially examined to determine the number of students falling into each reading achievement level. Using this information and the results of the reading style questionnaire, a contingency table was developed for the four perceptual areas defined by this study. The frequencies on the table were used to compute the Chi-square test of independence. In order to provide a clear picture of which reading achievement groups' preferences had the greatest effect on the Chi-square test of independence, the data were examined further in a probability table.

The four perceptual areas viewed with the three reading achievement levels revealed that one perceptual element was shown to be statistically significant at the 0.05 level. Despite the fact that not all the elements were significantly different in relation to the three groups, the figures in the probability table did provide some information.

The following tables reflect a synthesis of the data provided in the contingency and probability tables. The terms used as headings for each table are those that the reading style inventory used in reporting the specific perceptual preferences.

Table 1

Reported Auditory Perceptual Preferences
by Reading Achievement Levels

Auditory Perceptual Preference				
Reading Achievement	Excellent	Good	Fair	Poor
Above Average	^a (16) 57.14%	(7) 25.0%	(4) 14.29%	(1) 3.57%
Average	(17) 37.78%	(9) 20.0%	(15) 33.33%	(4) 8.89%
Below Average	(9) 18.75%	(9) 18.75%	(18) 37.50%	(12) 25%

$$\chi^2 = 18.47$$

$$df = 6$$

$$\text{Critical Value} = 12.592 (0.05)$$

Reject the null hypothesis

^a All figures in () indicate frequencies

The data revealed that in this study reading achievement is related to the preference of auditory perception (see Table 1). Students' preferences in the low reading achievement group had the most influence on the chi-square value. Significantly fewer students in this group had an excellent preference for learning auditorily, while a significantly greater number of these students felt learning auditorily was a poor perceptual choice.

Table 2 reveals no significant difference between the reading achievement groups and the preference for learning visually. Although no significant relationship was shown, those students in the high reading achievement group having an excellent preference for learning visually, those in the low reading achievement group having an excellent preference and those having a fair preference for visual learning were shown to have had the greatest influence on the chi-square value. In all three cases, more students than expected felt a preference for visual learning.

Table 2
Reported Visual Perceptual Preferences
by Reading Achievement Levels

Reading Achievement	Visual Perceptual Preference			
	Excellent	Good	Fair	Poor
Above Average	(14) 50%	(8) 28.5%	(5) 17.86%	(1) 3.57%
Average	(15) 33.33%	(18) 40%	(8) 17.78%	(4) 8.89%
Below Average	(8) 16.6%	(18) 37.5%	(15) 31.25%	(7) 14.5%

$$x^2 = 11.75$$

$$df = 6$$

$$\text{Critical Value} = 12.592 (0.05)$$

Fail to reject the null hypothesis

There was no significant difference in the reading achievement of fifth graders and their preference for tactile learning. The data revealed that those in the average reading achievement group

showed a greater moderate preference for this type of learning than was expected. It was expected that a greater number of those students in the low reading achievement category would have had a strong preference for learning tactually than was shown.

Table 3
Reported Tactual Perceptual Preferences
by Reading Achievement Levels

Tactual Perceptual Preference				
Reading Achievement	Strong	Moderate	Mild	None
Above Average	(3) 10.71%	(14) 50%	(11) 39.29%	---
Average	(8) 17.78%	(23) 51.11%	(13) 28.89%	(1) 2.22%
Below Average	(8) 16.6%	(18) 37.50%	(22) 45.83%	---

$$\chi^2 = 4.84$$

$$df = 6$$

$$\text{Critical Value} = 12.592 (0.05)$$

Fail to reject the null hypothesis

No significant difference was revealed after an examination of the data matching reading achievement and the preference for kinesthetic learning. Those students in the below average achievement group did show a trend for having a strong to mild preference for this type of learning, more so than those in the average and above average groups.

Table 4

Reported Kinesthetic Perceptual Preferences
by Reading Achievement Levels

Kinesthetic Perceptual Preference				
Reading Achievement	Strong	Moderate	Mild	None
Above Average	(21) 75%	(6) 21.43%	(1) 3.57%	---
Average	(34) 75.56%	(11) 24.44%	---	---
Below Average	(39) 60.41%	(17) 35.42%	(2) 4.17%	---

$$x^2 = 4.30$$

$$df = 6$$

$$\text{Critical Value} = 12.592 (0.05)$$

Fail to reject the null hypothesis

Summary

Of the four perceptual categories examined only one was statistically significant at the .05 level. The category of auditory perceptual preferences revealed that a significant number of those in the below average reading achievement group felt that this was a poor perceptual choice.

Although no significant relationship was noted between a visual perceptual preference and reading achievement, this group of subjects, overall, did show a greater preference for visual learning than was expected. This was most surprising for those in the low reading achievement group many of whom, contrary to the research, felt auditory learning was a poor perceptual choice.

Those in the below average reading achievement group also did not show as strong a preference for learning tactually as was expected. Yet, those same students did show a trend toward learning kinesthetically.

Students in the average reading achievement group did not exhibit strong preferences for any of the specific perceptual modes. This could be because this group tends to use all of the modes, depending on the learning situation in which they are involved. They may be more flexible in their perceptual style and therefore not dependent on learning in one, or two specific modes.

The above average readers were expected to show a greater preference for visual and auditory learning.

Generally, those students reading below average had the greatest statistical influence of the three achievement groups. These readers did not wish to learn auditorially and were moving toward having a strong preference for kinesthetic learning.

Chapter V

Conclusions and Implications

Purpose of the Study

This study examined the relationship between fifth graders reported preference in the reading style element of perception and their reading achievement.

Conclusions

Since the purpose of this study was to search for relationships between reported perceptual preferences and reading achievement levels, it is sufficient to conclude that fifth graders have strong feelings about the other perceptual categories, while indicating some trends, are not strong enough to affect their reading achievement.

Also evident was that subjects' perceptions in the above average and below average reading achievement group had the greatest impact on whether or not a relationship was found or a trend indicated.

Generally, students in the below average reading achievement group did not prefer to learn in an auditory mode. The above average and below average subjects gave an indication that their perceived preferences for learning visually were greater than

expected. No reading achievement group showed an overwhelming preference for learning tactually, while those in the below average group gave an indication of having a strong to moderate preference for learning kinesthetically.

Price's (1980) research supports the findings of this study. He also found that poorer readers did not show a preference for auditory learning.

Price, Dunn and Saunders (1981) and Carbo (1983b) found that poorer readers tended to be strongly tactile and kinesthetic. The subjects of this study did not match this profile although they indicated a movement toward learning kinesthetically.

It was expected that the perceptions of the below average readers of this study would reflect the major findings outlined in the literature, namely, preferences for tactile and kinesthetic learning and a non-preference for visual and auditory learning. However, strong preferences were found only in the auditory mode.

The responses of the poorer readers indicate that they are moving to perceive visual learning as a more comfortable mode than tactile or kinesthetic. It may be that due to the age of these subjects their preferences are developing away from those characteristic of young and poorer readers. It appears that the perceptions of fifth graders, reading at a below average level, are in a state of transition. They are beginning to perceive learning as older students typically do while retaining some strong feeling usually evidenced by young and poor readers.

Implications for Research

This study raises questions worthy of pursuit for additional research in the area of reading styles.

Rather than simply providing general perceptual preference characteristics for young/old and good/poor readers, additional research could work to identify the perceived preferences at specific grade levels. As the mid to upper grades are examined, research could focus on when the age of the student has a greater effect on the perceptual preferences than the achievement level.

The information gained in this type of study could be extended. Additional research could focus on teaching children according to their perceived strengths in order to determine an effect on their reading achievement.

Information gained from reading styles inventories could be used in the development of instructional methods thus assisting teachers in planning the most effective programs for their students.

Implications for Classroom Practice

The findings of this study provide educators with data that may assist in the planning for and teaching of fifth grade readers.

The study showed that intermediate students are able to identify the perceptual mode through which they prefer to learn. Teachers at this level, utilizing this data, would be able to provide opportunities for optimal learning, by planning to have students experience new and vital information in their preferred

mode. This appears to be most vital in meeting the needs of the poorer reader.

At this age it appears that students, despite their current reading achievement level, may be moving from being comfortable learning in one perceptual mode to learning in a different mode. For example, it was expected in this study that the below average readers would only perceive auditory learning as acceptable, as was suggested by the research. While they did show a significant preference for auditory learning, a surprising number of them exhibited a tendency toward learning visually, a perceptual mode characteristically preferred by older/above average readers.

Because of this finding, teachers at this level should be aware of the changing perceptual preferences of their pupils. Close observation of student work habits will assist teachers in noting preferences and changes. A student who can not process auditory input, yet is successful when dealing with it in a visual format, is functioning in a visual mode and should be given opportunities to deal with instructional material in this fashion. It should be noted that reading styles/learning styles in addition to changing over time, may be different in certain situations.

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