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ABSTRACT

A study examined the attitudes of educators toward content area reading in the early elementary grades. A self-report survey instrument called the Attitudes Toward Content Area Reading (ATCAR) was developed to measure educators' attitudes and to ascertain whether there were different theoretical orientations of educators relative to content area reading theory. Q-technique factor analysis was used on an unstructured Q-sort to investigate whether respondents could be clustered into groups or prototypes from the data collected from the ATCAR. Three groups of respondents were surveyed including 15 content area experts, 15 inservice teachers, and 25 preservice teachers. Results indicated that identifiable clusters of prototypical individuals are apparent. These include those who appear to view content area reading ranging from a theoretical orientation closely allied with a skills approach of learning to read to those who indicate a tendency toward viewing content area reading as part of a whole language approach stressing reading-to-learn. (Contains 50 references, and 3 tables and 1 figure of data.) (Author/RS)

Understanding Attitudes of Educators Toward Content Area Reading in the Early Elementary Grades

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Abstract

The present study was designed to examine the attitudes of educators toward content area reading in the early elementary grades. A self-report survey instrument called the Attitudes Toward Content Area Reading (ATCAR) was developed to measure educators' attitudes and to ascertain if there were different theoretical orientations of educators relative to content area reading theory. The study was conducted using *Q*-technique factor analysis on an unstructured *Q*-Sort (n = 55) to investigate whether respondents could be clustered into groups or prototypes from the data collected from the ATCAR. Three groups of respondents were surveyed including content area experts (n = 15), inservice teachers (n = 15), and preservice teachers (n = 25). The results indicated that identifiable clusters of prototypical individuals are apparent who appear to view content area reading ranging from a theoretical orientation closely allied with a skills approach of learning to read to those who indicate a tendency toward viewing content area reading as part of a whole language approach stressing reading-to-learn.

Understanding Attitudes of Educators Toward Content Area Reading in the Early Elementary Grades

Content area reading instruction has been defined as "instruction designed to help students comprehend text from subject areas such as social studies, science, literature, mathematics, and so forth" (Gee, Olson, & Forester, 1989, p. 30). Content area reading is comprised mainly of expository texts written for the purpose of providing information to a reader (Weaver & Kintsch, 1991). The need for content-based reading instruction that develops reading-to-learn strategies has been acknowledged by educators since the beginning of the 1900s (Gee, et al., 1989; Moore, Readence, & Rickelman, 1983). The research base on content area reading has expanded rapidly in the past several decades, focusing primarily on expository text, reading strategies, and textbook readability (Smith & Feathers, 1983); however, the teaching of content area reading is not generally viewed as a part of the early elementary grade curriculum. Instead, content area reading often is seen as a remedial component of instruction and relegated almost exclusively to the secondary grades (Moore et al., 1983).

Research into the reading process has stimulated the advancement of theories of reading. A theory "is a system of ideas, often stated as a principle, to explain or to lead to a new understanding" (Harris & Hodges, 1981, p. 329). How

we teach is largely affected by the theoretical stance that we adopt--our theoretical orientation (DeFord, 1979; Harste & Burke, 1977). What a teacher believes about reading and learning can be translated into instructional practice which will in turn influence the way we teach children to read. Hence, all reading instruction is theoretically based, even when teachers are not conscious of this fact (DeFord, 1979; Reutzel & Cooter, 1992). By studying the theories which have evolved about the reading process and their resultant instructional models we are better able to make informed decisions about how and what to teach children about reading.

An extensive review of literature, including a search of Dissertation Abstracts, the ERIC data base via pertinent descriptors, and a follow-up of related citations using the snowball method (Weitzel, 1990), indicated that studies of early elementary grade teachers' attitudes toward the teaching of content area reading are almost nonexistent. Although Howe and Grierson (1995) have examined the role that knowledge of content area strategies plays in the early elementary grade curriculum, studies on teacher attitudes toward the teaching of content area reading have focused upon secondary teachers, (e.g., Gehrke, 1982; Gillespie & Rasinski, 1989; Lee & Young, 1976; Lipton & Liss, 1978; O'Rourke, 1980; Singer, 1979; Usova 1978; Vaughan, 1977) which leaves the question of how

teachers perceive content area reading in the early elementary grades unanswered.

Attitudes are defined by Kerlinger (1986) as an "organized predisposition to think, feel, perceive, and behave toward a referent or cognitive object" (p. 453). The study of how attitudes can be changed allows for a better understanding of teacher behavior and classroom practice toward the teaching of content area reading (Dupuis & Askov, 1978).

Consequently, the purpose of the present study was to develop a self-report instrument for the purpose of identifying respondents with similar attitudes or theoretical orientations toward the teaching of content area reading in the early elementary grades. It was anticipated that quantitative analysis of responses to this instrument would yield clusters of individuals with similar responses (i.e., attitudes) toward content area reading, thereby confirming the viability of the various theoretical orientations thought to underlie reading instruction.

REVIEW OF THE LITERATURE

Gee, Olson, and Forester (1989) state that one of the primary missions of education is to teach students to *read to learn*. Content area reading allows a student to use the skill of reading to acquire knowledge of a specific discipline or area of study (McKenna & Robinson, 1990). Yet, researchers have repeatedly stated that students have difficulty in comprehending and using expository

(informational) text (Alvermann & Boothby, 1982; Armbruster, Anderson, Armstrong, Wise, Janisch, & Meyer, 1991; Piccolo, 1987) or are unaware of text structure (McGee & Richgels, 1985; Taylor & Samuels, [illegible]). Alvermann and Boothby (1982) argue that it is the students' lack of exposure to expository text, coupled with the students' difficulty in interpreting unfamiliar content and vocabulary associated with reading in a given content area, that causes comprehension difficulties. Although some researchers, including Moore, Readence, and Rickelman (1983), have acknowledged that young readers are interested in information-based text, formal content area instruction continues to focus on middle-school and senior high students. Do teacher attitudes toward the teaching of content area reading in the early elementary grades contribute to this situation?

Theoretical Orientations to Reading

Divergent theories have been proposed as ways to conceptualize the *learning-to-read* process. The theories attempt to explain whether the text or the reader is of primary importance (Reutzel & Cooter, 1992; Smith, 1988; Weaver, 1990). According to DeFord (1979), there are three basic theoretical orientations that drive the pedagogy of reading: phonics, skills, and whole language. These orientations exist on a continuum, according to DeFord, ranging from (a) a phonic

approach, which focuses upon units smaller than single words, through (b) whole words and skills to (c) whole language-based approaches, wherein meaning is paramount. Within the phonic orientation, reading instruction is initially built upon mastery of the letters of the English alphabet and approximately 40 accompanying speech sounds (Thompkins & Hoskisson, 1991), followed by a list of non-phonetic sight words, and finally comprehension of text. For teachers using the phonic approach, learning to read means learning to decode words, thus phonic or subskill approaches, according to Reutzel and Cooter (1992), are used to teach children to break language down into its smallest components.

Within the second orientation, the skills approach, hierarchically ordered sets of skills are taught during each lesson. Mastery of skills is important in that skills are thought to occur in a sequential order. As vocabulary, decoding, and comprehension are taught separately, reading consists of moving from part to whole in the skills approach (DeFord, 1979). An example of the skills approach is the scope and sequence charts used in the basal reader approach (Reutzel & Cooter, 1992).

A whole language philosophy is thought to encompass the third orientation to reading (DeFord, 1979). The whole language philosophy views meaning as central to language acquisition and use. Strategies for learning to read are flexible,

incorporated when needed as natural extensions of the act of reading. All the components of language are equally important for the whole language teacher--listening, reading, speaking, viewing, and writing. Interest and an integrated curriculum are hallmarks of this approach in which books and reading are focal points.

The differences in these viewpoints have resulted in diverse pedagogical practices. According to Singer (1980) one of the problems with reading research has been the application of new knowledge to pedagogy, often resulting in a gap between what research has shown to be effective and what is actually practiced within the classroom setting. Although research has demonstrated the benefits of content area reading instruction, little has been done to integrate this area into the early elementary grades' curriculum. Educators' attitudes are based upon individual theoretical orientations to reading which must first be understood before any change can be effected in the early elementary grades.

Content Area Reading Attitude Surveys in the Secondary School

It has been suggested that positive attitudes toward content area reading can translate into increased use of reading strategies in the classroom (Dupuis & Askov, 1978; Dupuis, Askov, & Lee, 1979). How are attitudes toward the teaching of content area reading measured? According to Gillespie and Rasinski

(1989), early studies (i.e., Flanagan, 1975; Lloyd, 1985; O'Rourke, 1980; Singer, 1979; Usova, 1979) attempted to measure attitudes of secondary school respondents separate from practices or other variables such as participation in workshops or content area reading courses.

One of the earliest measures of secondary teachers' attitudes toward content area reading was the Chin Inventory on Content Area Reading Instruction (Chin, 1975), which measured 27 reading instruction competencies. The instrument had a dual purpose: (a) to measure secondary teachers' attitudes toward content area reading, and (b) to measure self-perceptions about competence in teaching content area reading skills. Although Chin's inventory was limited according to Flanagan (1975), in that it used behaviorally specific statements (consequently measuring behaviors, rather than attitudes), Flanagan reported that this inventory indicated that increased competency is a result of training and years of experience.

Usova (1979), Lipton and Liss (1978), and O'Rourke (1980) created instruments to measure teachers' attitudes toward content area reading. These researchers all concluded that positive attitudes toward the teaching of reading strategies are based upon a knowledge of the theories behind the teaching of reading. For instance, teachers of English have had more experience with reading

theory and consequently score higher than other subject specialists on these instruments. A knowledge of reading theory seems to play an important part in positive perceptions of content area reading.

Singer (1979) modified an attitude scale by Otto and Smith (1969). Using this instrument, Singer found that teachers who view the teaching of content area reading as an unconnected series of skills often have negative attitudes toward the teaching of content reading. As with U'sova (1979), Singer concluded that positive attitudes are contingent upon a teacher having both knowledge and understanding of the process of reading.

Positive attitudes, however, are not enough to change instructional practice. Studies by Dupuis, Askov, and Lee (1979), Gehrke (1982), Otto (1969), and Stieglitz (1983) were designed to study how teachers' attitudes and instructional practices are related. Do teachers' attitudes improve with staff development in content reading? These researchers concluded that teachers are willing to learn how to teach content reading, and transfer this learning into classroom practice, if given adequate training and ongoing support. Stieglitz additionally asserted that instructional strategies related to content area reading are more likely to be employed after a teacher has taken a course in content area reading.

In a review of attitudinal studies on content area reading in secondary schools, Gillespie and Rasinski (1989) concluded: (a) there is a lack of knowledge about reading and especially the strategies specific to content area reading; (b) two important factors which affect attitude toward the teaching of content area reading include the amount and type of instruction; (c) teachers want to know more about content area reading and are willing to attend classes or workshops; and (d) staff development increases positive perceptions and the desire to use content area reading strategies.

Although many critical insights regarding teacher attitudes toward content area reading in the secondary grades have emerged from recent research, an instrument that measures teachers' attitudes toward content area reading instruction in the early elementary grades has not surfaced. Is there any evidence of a need for content area reading in these beginning grades?

Content Area Reading Programs: The Benefits for Children

Researchers such as Pappas (1990) and Spiro and Taylor (1980) have concluded that children have a rudimentary knowledge of both narrative and expository text. Smith (1988) has stated that children know many things about the uses of literacy even before they enter formal schooling. Any types of literacy-related tasks that are part of a child's environment become, according to Smith,

events that allow children to participate in the "literacy club" to which all people who use language belong (p. 215). If reading is basically a developmental progression as Gee et al. (1989) and Sulzby (1985) have hypothesized, knowledge of all genres of reading, including content area reading, may be beneficial in the early elementary grades.

Early studies which indicate that children could benefit from content area instruction include Durkin's (1978) investigation of reading comprehension instruction in the fourth grade social studies curriculum. By third and fourth grade, Durkin observed that there were already children who could not read well enough in content areas to participate at an acceptable level in classroom activities, despite the availability of reading specialists in the school. Investigations including Durkin's conclude that teachers do not view subjects area lessons as a time to help children read to learn.

Children can be taught reading strategies at an early age. While young children are not aware of their own cognitive processes, Brown, Campione, and Day (1981) found that children can be taught to learn from text through monitoring their learning. In a year-long study of fourth-grade children, Payne and Manning (1992) discovered that when taught comprehension strategies, children scored significantly higher in reading comprehension than a traditionally taught

basal reader group and experienced improved attitudes toward reading and greater ability to use reading strategies to set purposes for, control, and evaluate their own reading.

While replicating and extending the findings of previous studies on teachers' textbook use, Armbruster, Anderson, Armstrong, Wise, Janisch, and Meyer (1991) found that young children are not given opportunities to read content area texts very often, resulting in an unfamiliarity with the genre, and that the instruction that children do receive "does not foster the development of conceptual understanding and meaningful learning" (p. 36). The finding that children are generally unfamiliar with content area text has been empirically studied (Alvermann & Boothby 1982; Englert & Hiebert, 1984; Flood, 1986).

As most children learn to read from basal readers, there is also a problem due to the overemphasis of narrative text in these readers. The basal readers that do offer expository selections have passages that are short, self-contained, and have little resemblance to the surrounding text. Armbruster et al. (1991) noted that the teacher, not the text, is the primary source of information in the classroom and concluded that teachers need to (a) instruct children to read content text in earlier grades, (b) encourage children to read more broadly in content area texts, and (c) ask more questions to encourage meaningful learning and the comprehension of

important concepts.

Recommendations and benefits of content area reading include the development of independent learners and effective readers (Smith & Feathers, 1983b). Gee, Olson, and Forester (1989) suggested that three other benefits students derive from content area reading programs include better study habits, more positive attitudes toward reading, and improved overall achievement.

Hypothesis

The purpose of the present study was to create an instrument that would provide a measure of educators' attitudes toward content area reading in the early elementary grades. An unstructured *Q*-sort was designed consisting of statements derived from a variety of sources, selected to measure attitudes toward content area reading. The specific research question addressed in this study was: Is it possible to develop a self-report instrument for the purpose of identifying clusters of respondents with similar attitudes which are indicative of their theoretical perceptions of content area reading in the early elementary grades?

Rather than investigating relationships among variables, the present study used *Q*-technique factor analyses to identify the relationships among individuals who responded to items included in the Attitudes Toward Content Area Reading (ATCAR) instrument. These analyses sought to ascertain whether theoretical

orientations of persons could effectively be used to cluster these persons into meaningful groups. The following null hypothesis was posited and empirically tested: There will not be any identifiable clusters of persons responding to the ATCAR when individual responses are intercorrelated and subjected to factor analysis using the *Q*-technique.

Methodology

Broadly defined, the *Q*-technique "is a set of procedures used to implement *Q* methodology. It centers particularly in sorting statements contained on decks of cards in *Q-sorts* and in the correlations among the responses of different individuals to the *Q*-sorts" (Kerlinger, 1986, p. 506). A sophisticated way to rank order objects, in this case individuals, *Q*-analysis is a form of "inverse factor analysis" (Comrey & Lee, 1992, p. 229) producing clusters of individuals with similar responses. The primary strength of *Q*-analysis, according to Kerlinger, is that it is a powerful theory-testing approach which can be used with a relatively small sample size.

The ATCAR instrument uses a "summated rating scale," which is defined by Kerlinger (1986) as "a set of attitude items, all of which are considered of approximately equal 'attitude value,' and to each of which subjects respond with [varying] degrees of agreement or disagreement" or attitudinal intensity (pp. 453-

454). Through a summation of individual responses, it is possible to place an individual on an attitudinal continuum. The advantage of the summated rating scale is that the researcher is able to achieve greater variances in responses than might occur via ipsative, dichotomous ratings of the items (e.g., "agree" versus "disagree").

For the purposes of the present study an "unstructured" *Q*-sort was used (Kerlinger, 1986) consisting of statements (i.e., items) derived from various sources, without specific regard for the larger constructs or factors to which each item belongs. According to Kerlinger, through factor analysis of the *Q* profiles of respondents (i.e., the way in which the respondents sort the items), a preliminary theory or heuristic hunch can be tested. *Q*-methodology creates a factor array from the original *Q*-sort as follows:

> A "new" *Q*-sort [is] constructed from factor analytic results. . . . These items and their array values express the essence or content of a person's factor. They epitomize the variable that the persons on the persons' factor share to a substantial degree. They form, in other words a prototype. (Kerlinger, 1986, p.521)

In the present study, *Q*-methdology was utilized to determine how closely people correlate with one another in their theoretical orientations toward reading, and

thereby offer evidence as to the degree to which persons' actual theoretical orientations match those proposed by reading researchers.

Subjects

Three distinct groups of subjects were used in the present study: (a) undergraduate students (n = 25) enrolled in a teacher education program at a university located in a small urban setting in the southern United States; (b) inservice teachers who taught in the geographic vicinity of the university (n = 15) and; (c) experts including faculty and graduate students who were familiar with a field of content area reading (n = 15). The total number of subjects in the study was 55. Each group of subjects was analyzed in a separate Q-technique factor analysis for the purposes of testing the null hypothesis and identifying groups or clusters of individuals whose responses demonstrated prototypic theoretical orientations toward reading instruction.

Instrumentation

The ATCAR items were derived from an extensive review of professional literature about content area reading and through interviews with faculty members with expertise in reading instruction from several comprehensive universities. A total of 30 items was included in the instrument, a copy of which is presented in Table 1. The items reflect many expert, though often conflicting, opinions about

content area reading.

INSERT TABLE 1 ABOUT HERE

The ATCAR consists of 30 statements or items which the respondents in the present study were requested to physically sort into five piles of responses--"strongly agree," "agree," "neutral," "disagree," and "strongly disagree." The sort is forced, as the respondent is asked to place a predetermined number of the statement cards in each pile, with the number of responses in center piles being relatively large as compared to the number of responses in the extreme piles. The result is a quasi-normal distribution of the cards (Kerlinger, 1986). In the present study, the number of cards assigned to the "strongly agree" through "strongly disagree piles were 4, 6, 10, 6, and 4, respectively. Upon sorting the responses in this manner, the respondents were then asked to rank order the cards in each pile or category of responses. In this manner, known as a "mediated ranking" strategy, all of the cards are rank-ordered from the statement agreed with most to that statement which is least acceptable (Thompson, 1980).

Data Collection and Analysis

The ATCAR *Q*-sort was administered to 60 respondents from the three groups: undergraduate preservice teachers (n = 25), inservice teachers (n = 15), and content area experts (n = 15). The surveys were individually administered by

the researcher and a graduate student. The inservice teachers completed the analysis after regular school hours; the preservice students and content area experts completed the instrument during nonclass hours at the university.

A series of separate factor analyses was conducted on responses from each of the three groups using the *Q*-technique to test the null hypothesis. Each of the groups was guaranteed anonymity and given the option to participate in the study and to withdraw from the study at any point without penalty.

Results

The data utilized for the procedure were collected from printed copies of the ATCAR *Q*-sort form (see Figure 1) whereon respondents had recorded the results of the physically sorted statement cards. The responses of each of the subjects were recorded on the survey form with the researcher subsequently rating the mark on the top left of each form with a rank of "30" while the bottom right mark was given a rank of "1." The "30" indicated that the subject agreed most strongly with this item while the "1" indicated that this item was least acceptable. The total number of respondents was 60, with 30 preservice teachers, 15 inservice teachers, and 15 content area experts completing the survey.

A factor analysis was performed for each of the three groups of subjects.

"In the *Q*-technique factor analysis the subjects, or data objects, are correlated with each other, and the factors show the relationships of the subjects or data objects to each other" (Comrey & Lee, 1992, p. 233). The purpose of this initial analysis was to ascertain whether individuals could be clustered into factors of similar respondents. The results of these analyses were then used to identify any representative prototypes or groups of individuals who responded to the set of items in a distinctive manner.

The *Q*-technique factor analyses were completed using the SPSSx FACTOR procedure. The factors were extracted from the data through the use of principal components analysis which provides "a mathematically unique solution" (Kerlinger, 1986, p. 576) to a factor problem. This method extracts the maximum amount of variance while reorganizing the correlations to bring out dimensions and relationships within the data during the calculation of each factor (DeFord, 1978). For each group of respondents (1 = preservice teachers, 2 = inservice teachers, and 3 = content area experts) separate analyses were performed using two through four factors based on factor "scree" tests to define which solution was most interpretable. The three factor analyses were deemed most interpretable with a minimum factor structure coefficient of |.60|. Eigenvalues derived from the solution were obtained to indicate the percentage of variance that is explained by

each of the factors. In each case, Factor I was well defined, accounting for approximately 50% of the prerotational variance (Factor I, Group I = 45.2%, Factor I, Group 2 = 51.8%, and Factor I, Group III = 53.6%).

The factors were then rotated to the varimax criterion to find spatial relationships or unities that might exist in factor space. The rotated factor matrix is presented in Table 2, along with the individuals factored. Rotation achieves a simple structural picture by reducing the complexity of the variables (Kerlinger, 1986). The highest correlations reported for the factors represent the strongest relationships.

A regression factor score was then examined for each item to determine the degree to which each subject responded differently to each item of the ATCAR as compared to other items and to the subjects who were associated with the other two factors. The factor score serves as a *z*-score for each of the items of the ATCAR on each of the factors. If an item received a factor score greater than 1.000, this indicated that the item was ranked fairly high by the people in that factor. Conversely, a score of -1.000 indicated that people in that factor scored the item fairly low. The factor scores for each item across the three analyses are presented in Table 3.

INSERT TABLES 2 AND 3 ABOUT HERE

Group 1: Preservice Teachers

The persons in Factor I included students enrolled in teacher education programs who, based upon their factor scores tended to agree strongly with a view of all teachers, regardless of subject area, as teachers of reading. They indicated a positive orientation to content area reading as a purposeful activity, guided by teacher modeling and input, but they did not give high ratings to any items that seemed to have a skills orientation. Factor I preservice teachers accorded high ratings to items recommending teacher guidance in content area reading.

Factor II preservice teachers tended to agree with the items which described content area reading as an intrinsic part of "all subject areas," and were positive toward items related to young students' comprehension of information-based texts that are read to them. In contrast, Factor III preservice teachers responded with high ratings to items about skills, agreeing with items about strategies, overall comprehension, and vocabulary. Perhaps more skills oriented, they tended to agree with items that viewed the acquisition of content area reading skills as something that one learns after first learning the skills of reading and gave low ratings to items linking expository and narrative text knowledge.

Group 2: Inservice Teachers

Factor I inservice teachers had a tendency to agree very strongly with the

item that "every teacher is a teacher of reading" (Item 1). They also appeared inclined to accord high ratings to statements such as "students must be taught how to read content area texts" (Item 19) and viewed the teacher as a model of strategy use who should instruct students on how to find information. The ability of students to comprehend orally read text is viewed by Factor I teachers as higher than their ability to individually read a text. Factor I teachers did not agree that reading strategies should be taught as separate skills but viewed content area reading as incorporated into the entire curriculum. Although all of the teachers in each factor gave negative ratings to the item pertaining to controlled textbook vocabulary increasing ease of reading, Factor II disagreed with this item most.

Factor II inservice teachers also rated the statement that "Every teacher is a teacher of reading" (Item 1) highly. This group tended to give positive marks to items such as revising texts and offering supplementary texts to increase comprehension. Items about group or class discussion and cooperative learning were rated highly. The Factor II inservice teachers agreed with Factor I on the fact that content area reading does not require any special materials, but differed in that they did not agree that content reading time should be interrupted if new words were encountered. Factor II persons also disagreed with Factor I's responses on the necessity of teaching students to find information before assigning a reading

passage (Item 23), rating this item negatively.

The most striking response of Factor III inservice teachers was their disagreement with the item "Every teacher is a teacher of reading" (Item 1). Factor III teachers also tended to disagree with teaching specific reading strategies for each subject area and even with the fact that they would need any "special training" (Item 22) in order to teach reading in the content areas. Reading for Factor III respondents is more of a natural process, as Factor III teachers tended to agree that even very young children were able to find information in books (Item 6). They also agreed with items related to comprehension such as the importance of student revision of text (Item 10), effectiveness of open-ended questioning techniques (Item 9), and the need to define new vocabulary when first encountered (Item 16). Factor III teachers disagreed with the item "When given a choice, students will choose to read fiction instead of information books" (Item 28).

Group 3: Content Area Experts

There was agreement across all of the three factor groups of content area experts on the fact that all teachers are teachers of reading. Conversely, persons in all three factors disagreed highly with the item that "the teaching of reading should be limited to the language arts block" (Item 5). Both Factor II and Factor III

persons gave a low rating to the item stating that a slow reading rate indicated difficulties with reading comprehension (Item 3).

Factor I experts reacted negatively to the statement about modeling having "little effect on teaching students to read content area materials" (Item 15). They agreed that preassessment of student interests should direct content reading (Item 7) and with the conception of reading "incorporated into all subject areas" (Item 26). Also, the concept that comprehension often exceeds reading ability was rated highly by Factor I experts who appeared to indicate that interest is a more important motivator for reading than is teacher-directed instruction (Item 7).

Factor II experts disagreed with the item stating that "Special materials are needed in order to teach students how to gain information from text" (Item 11). They tended to agree with items expressing a strategy view of content area reading and with teacher-initiated discussion for maximizing reading effectiveness. Items about student choice elicited strong disagreement including choice of the amount and type of reading (Items 12 and 28).

The Factor III experts accorded positive ratings to the item that "Reading instruction must be incorporated into all subject areas" (Item 26). Factor III experts also agreed highly with the statement that questioning should be open-ended (no right or wrong answers) to increase comprehension of information

passages (Item 9). Reading strategies taught as separate skills were negatively rated (Item 2), as were items about comprehension difficulties indicated by a slower reading rate and assigning reading for a specific purpose (Items 3 and 4).

DISCUSSION

The purpose of the present study was to create a self-report instrument to explore the attitudes of three distinct groups of subjects toward the teaching of content area reading in the early elementary grades. The Attitudes Toward Content Area Reading (ATCAR) instrument was administered to three subject groups including preservice teachers, inservice teachers, and experts in content area subjects to examine the null hypothesis that no identifiable clusters of persons on the Attitudes Toward Content Area Reading instrument (ATCAR) would be apparent when individual responses were intercorrelated and subjected to factor analysis using the *Q*-technique. As the results of factor analyses did indicate differences between groups or prototypes of individuals, regression factor scores were then computed for each of the items in the ATCAR instrument to ascertain if the factors could be linked to specific theoretical orientations to reading, based upon responses to specific items.

Factor I in each of the analyses emerged as the strongest, with individuals across the groups sharing common characteristics. The individuals in Factor I,

based upon the item factor scores, agreed strongly with the statement that "Every teacher is a teacher of reading" (Item 1) and that "Reading instruction must be incorporated into all subject areas" (Item 26). Factor I individuals gave low ratings to strategies taught as separate skills, limiting reading to the language arts block, and the statement that "Modeling of reading strategies has little effect on teaching students to read content area materials" (Item 15). The Factor I content area experts and inservice teachers also indicated that "students can understand information texts when they are read orally to them" even if these texts are too difficult for individual use.

Factor II preservice teachers, Factor II content area experts, and Factor III inservice teachers indicated an area of commonality in their disagreement with assigning content reading for "a specific purpose" (Item 4). These groups also indicated a tendency to agree that "Even very young students should understand how to find information in textbooks" (Item 6) and that "New vocabulary should be defined when encountered during reading" (Item 16).

Factor II inservice teachers showed a propensity along with Factor III preservice teachers, to view the use of "supplementary texts or less difficult materials" as important for children who had difficulty with reading (Item 8). These groups, and Factor III content area experts also gave positive ratings to the

activity of cooperative learning.

Predictably, there were more individuals in the preservice group who responded in a neutral manner, than in the other two groups. This could be a reflection of the type of group that was surveyed. Many of the respondents are in their first year of teacher education and the researchers noted that some seemed to complete the ATCAR *Q*-sort in a somewhat random fashion, sorting items into clusters of subsequently numbered items, as if at a loss as to where to put them. The researchers suspect that a lack of reading theory knowledge on the part of some preservice teachers may result in a somewhat more random sort.

Both Factor III inservice teachers and Factor III preservice teachers agreed strongly with the integration of reading strategies into their teaching to increase comprehension. The Factor III preservice group and the Factor III content area experts gave low ratings to the statement that "The ability to understand expository and narrative develops at the same time" (Item 25). Although some of the factors, such as Factor III in both the preservice and inservice groups were not well defined, this instrument did yield enough interpretable clusters of individuals to suggest its ability to identify differences in people's attitudes.

CONCLUSION

Unlike previous studies, including those by Flanagan (1975), O'Rourke

(1980), and Singer (1979), which examined teacher attitudes toward content area reading in a secondary school setting, the present study focused upon the early elementary grades. This exploratory study did find that individuals in three distinct groups consisting of preservice teachers, inservice teachers, and experts in content area subjects could be factored into identifiable clusters of individuals regarding attitudes toward content area reading.

The ATCAR, although able to effectively distinguish between cohorts of respondents using the *Q*-technique factor analysis, needs further refinement to validate the constructs underlying the items. Three separate factors or cohorts of individuals did emerge in each of the surveyed groups, yet it is premature to state that these groups correlate with the theoretical orientations defined in professional literature as phonics, skills, and whole language (DeFord, 1979). Although this may be the case, some of the groups contained too few individuals to adequately define the factor, including preservice Factor III and inservice Factor III. The existence of specific theoretical constructs could be tested using *R*-technique factor analysis to provide evidence of the construct validity of the items using a given data set (Ferrell & Daniel, 1995).

The results of the present study are strengthened by the fact that there were replicable findings across three distinct groups of respondents, encouraging further

replication. There did not seem to be items in this instrument that indicated a phonics orientation, although skills and whole language-related questions were found. An unexpected result was the instrument's strength at showing preference for a locus of an instruction viewpoint (Weaver, 1990). The researchers noted that item responses factored into either (a) a "transmission" model, with an emphasis on direct teaching controlled by the program and the teacher or (b) a "transaction" model in which the emphasis lies with the student's learning, facilitated but not controlled by a teacher. This division should be studied in future research.

While opinions of respondents varied extensively as to this locus of instruction, the study does provide evidence that many of the respondents do view the early elementary grades as a time to teach content area reading. One item that needs to be included in a future study would specifically ask if the teaching of content area reading is important in the early elementary grades.

Also, as noted by Gillespie and Rasinski (1989), a self-report technique gives a limited of view of what actually occurs within the classroom. What educators report that they do, is not always translated into actual practice. More research must be conducted in the elementary classroom to observe (a) at which grade level content reading becomes beneficial, and (b) which types of instruction are most effective.

Although content area reading has traditionally not been viewed as a distinct teaching focus of the early elementary grade classroom (Moore, Readence, & Rickelman, 1983), the results of the present study suggest that teachers do indeed have distinguishable and differing attitudes about the role of content area reading during these years. Further study is warranted on this issue to better understand how teacher attitudes affect how and what they teach during these critical early years.

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Table 1. Items included in the Attitudes Toward Content Area Reading Survey

(1)	Every teacher is a teacher of reading.
(2)	The teaching of strategies for reading information text are best taught as separate skills.
(3)	A slower rate of reading indicates that a student is having difficulty comprehending the text.
(4)	Content reading should be assigned for a specific purpose.
(5)	The teaching of reading should be limited to the language arts block.
(6)	Even very young students should understand how to find information in textbooks.
(7)	Preassessment of students' interests should direct content reading instruction.
(8)	Supplementary texts or less difficult materials are needed for students who read below grade level.
(9)	Open-ended questioning techniques are effective in increasing comprehension of informational passages.
(10)	When students revise passages of text, their comprehension increases.
(11)	Special materials are needed in order to teach students how to gain information from text.
(12)	Students should be able to choose the amount of reading that they will do for a class assignment.
(13)	Every subject area requires different reading strategies.
(14)	A teacher should first introduce an information book by discussing how it might be read most effectively
(15)	The modeling of reading strategies has little effect on teaching students to read content area materials.
(16)	New vocabulary should be defined when encountered during content reading.
(17)	Integrating the teaching of reading strategies into the content areas is necessary for increased comprehension.
(18)	If interested in a reading assignment, students will want to talk about it after it is completed.
(19)	Students must be taught how to read content area texts.
(20)	Cooperative learning aids in the comprehension of information books.
(21)	Stories are easier for beginning readers to understand than nonfiction or information books.
(22)	A teacher requires special training to teach students how to read content area materials such as textbooks.
(23)	Before assigning content area reading to students, the teacher should first teach the students how to find information.
(24)	Students who have problems in content area reading probably need remediation.
(25)	The ability to understand narrative and expository text develops at the same time.
(26)	Reading instruction must be incorporated into all subject areas.
(27)	Students can understand information texts when they are read orally to them, even if they cannot read them individually.
(28)	When given a choice, students will choose to read fiction instead of information books.
(29)	Textbooks are easier to read than nonfiction trade books, because they have a controlled vocabulary designed for the specific age of the child.
(30)	Primary grade children can explain the differences between fiction and nonfiction.

Table 2. Varimax Rotated and Sorted Three-Factor Solution (n = 55)

Subjects	Preservice Factors (n = 25)			Inservice Factors (n = 15)			Content Area Expert Factors (n = 15)		
	I	II	III	I	II	III	I	II	III
		.68996		.78473					
	.74822			.77642					
			.72914				.77550		
				.60683				.70360	
					-.87034				.87738
		.65677						.79034	
		.68397		.69343					
					.80820			.84836	
									.60442
		.61621				.89510			.71551
	.89100			.71131			.83318		
	.72075				.68858		.82829		
							.65257		
	.68809						.78618		
	.64667								
	.62506								
		.68412							
		.62139							
	.79433								
	.65840								
	.82636								

Note. Coefficients greater than .60 are emphasized, indicating the factor with which persons are most highly correlated

Table 3. Factor Scores for ATCAR Items Across Sample Cohorts

	Preservice Teachers			Inservice Teachers			Content Area Experts		
Item	Factor I	Factor II	Factor III	Factor I	Factor II	Factor III	Factor I	Factor II	Factor III
	1.93285			2.37406	1.16685	-1.13073	1.50317	1.10191	
	-1.21044			-1.97626			-1.36209		-1.40275
	-1.15254							-1.07965	-1.83189
	1.04773	-1.50243			1.83872	-1.32776			-1.46860
	-1.23435	-1.35858		-1.06107	-1.35417		-1.13021	-1.22812	-1.06410
		1.07920		1.00692		1.65106		1.06603	
							1.16757		
			1.99132		1.45842				
						1.89543			1.27599
	1.08518		-1.53582		1.50495	1.09972			
	-1.25391			-1.37181	-1.13205			-1.13252	
		-1.27017						-1.65069	
			1.46446			-1.03129		1.50152	
	1.52313	-1.28753		-1.81472	1.36747	1.17702		1.51848	-1.43549
	-2.03309			-1.45143			-1.16274		
		1.28654	2.21799		-1.42440	1.45423	-1.31631	2.45325	
			1.31458			1.41461			
								-.43311	
				1.22494		-1.16311			
			1.26892		1.23256		-1.12054		1.97735
						-1.20312	-1.51385		
		-1.17628				-1.54624			
	1.32664			1.22717	-1.10032				
		-1.65190							
			-1.28862				1.74343		-1.79360
	1.23708	1.37924		1.22449	1.37724		1.32550		1.05124
	-1.41534	1.93680		1.00181	-1.03160		1.44390		
						-1.28347	-1.33050	-1.23987	1.03420
					-1.48778		-1.20679		
	-1.04116	1.62660	-1.55624						

Note. Factor scores ≥ .11 or greater are presented in bold

Figure 1

Attitudes Toward Content Area Reading (ATCAR) Q-sort Instructions

(A) You have been given 30 cards. Each card contains a statement about reading. Using your teaching experience and knowledge of reading, sort the 30 cards into 5 piles based on how strongly you agree or disagree with each statement.

(B) You need to place the specified number of cards under each of the 5 categories (i.e., **Strongly Agree** = 4 cards). When you have finished sorting the cards into 5 piles, prioritize each pile so that the statement you agree with most is on the top. Record each of the statement numbers (located on the cards) in the boxes provided.

Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
(4)	(6)	(10)	(6)	(4)
☐	☐	☐	☐	☐
☐	☐	☐	☐	☐
☐	☐	☐	☐	☐
☐	☐	☐	☐	☐
	☐	☐	☐	
	☐	☐	☐	
		☐		
		☐		
		☐		
		☐		