Preparing Pre-service Secondary Teachers for Coping with the Reading Related Problems that Affect Learning in the Content Areas

Samuel S. Myers

Given that secondary school students in the Caribbean and other countries accomplish much of their learning through interaction with textbooks and content area teacher exposition, this article argues that instructional strategies in these schools should be tailored to address and redress the reading related problems affecting teaching and learning in such settings. It is suggested that this can be done by the adoption of content area reading instruction in the secondary school classroom.

The related research literature dealing with teachers' negative attitude to, and lack of teacher preparation in, content reading instruction is reviewed. The literature reviewed implicitly suggests some relationship between teachers' negative attitude and the lack of training they receive. Although much of the literature reviewed emanates from outside of the Caribbean, their relevance to the region is recognized. The article finally reports on a training programme in Jamaica designed to prepare secondary pre-service teachers to cope with the reading related problems affecting teaching and learning in content area classrooms.

Background

During the 19th century, a group of related issues emerged concerning the nucleus around which learners' school experiences should be organized. These issues raised a number of questions. Should the curriculum be teacher-centred or pupil-centred? Should it comprise a logically organized subject matter, or, in the language of the seventies and more recent times, psychologically-organized subject matter? Should emphasis be on subject matter set out to be learned, or on subject matter related to the interests and needs of developing learners?
Prior to the 19th century, there was the general assumption that subject matter should be organized logically and dispensed to children and youth under control and supervision by teachers. Both ancient and early modern science had encouraged this view by maintaining that objective reality had a logical structure which could be easily defined (many authors of subject matter textbooks and articles still seem to share these views). To the extent that the curriculum could be fixed, and learners are by nature pliable, students would be expected to stretch to fit the standard curriculum.

All these fundamental curriculum issues have pervaded much of the history of education, and as they reappeared during the 1970s, or during any other decade, they were often regarded by some as completely novel, notwithstanding their age-old significance. As these curriculum issues impact on classroom instruction and learning in First World countries, they subsequently had the same effect in Third World countries such as those in the Caribbean Basin—manifest in varied curriculum innovative initiatives and thrusts at different points in time. As usual, whenever First World countries sneeze in the pursuit of curriculum innovation, we in the Caribbean catch the attendant pneumonia. However, as the debate continued in terms of whether the curriculum should be teacher or pupil centred, or comprise logically or psychologically organized subject matter, pupils were still expected to learn to read and read to learn. In other words, the more things reportedly changed in the school curriculum the more they remained the same. Indeed, whatever the curriculum was conceived to be, it was undergirded by the ability to read, whether this implied learning to read, or reading to learn, or both.

In most countries of the world, it was generally assumed that pupils learn to read in the elementary school in order that they may be better able to read to learn and access the curriculum content of the secondary school. However, as content area teachers in our secondary schools continued to encounter instances of students who performed very poorly in the subject areas of the curriculum, because of poor reading skills, this assumption was perceived by them to be false. At the same time, many of these reportedly poor performers in the secondary school system were claimed to be good and very good readers during their elementary school years. As these experiences remain common to the Caribbean and other countries, two related trends appear to continue. Firstly, most secondary
school content area teachers conceive their primary responsibility to be that of delivering the contents of their specialist area to their students—their poor reading and study skills notwithstanding. Secondly, not many secondary teacher education programmes were preparing teachers to manage the content area reading-related demands specific to the disciplines of the school curriculum.

Teacher Attitudes and Content Area Reading in the Curriculum

In his review of studies related to secondary teachers’ attitudes towards competence in content area reading instruction, Flanagan (1975) discovered that teachers’ attitudes to, and perceptions of, competence in teaching reading in content areas were generally negative. Factors cited as contributing to these negative attitudes and perceptions were insufficient teacher preparation programmes and inservice training in secondary reading instruction. Herber (1978) observed that "There is a need for a whole new strategy in reading through content areas, a strategy that draws from what we know about the direct instruction of reading but adopts that knowledge to fit the structure and responsibilities for the total curriculum in each content area" (p. 8). The need for the application of improved attitudes and new strategies to the teaching of content area reading, takes on a special urgency when it is considered that reading undergirds the entire school curriculum. In fact, effective reading is the most important avenue to successful learning.

There is indeed sufficient documentary evidence to support the need for improved teacher attitudes to, and training in, content area reading instruction. This evidence not only reflects current practices in the Caribbean, but lends support for emphasis in secondary teacher education programmes, designed to facilitate teachers in helping students to access the contents of the school curriculum. Newsome (1976) contends that content area teachers are the most qualified to teach the unfamiliar language, the purpose for the reading in the respective disciplines, and the clarifications of the concepts. Now let it be assumed that the content area teacher’s primary focus ought to be on the content curriculum of ideas, concepts and generalizations. Nevertheless, in order to enhance learning of content, teachers must, as Harp (1977) pointed out, be able to identify the students’ needs relevant to thinking and communicating about content materials. Wilson and Coswell (1985) reasoned that:
dividing items of knowledge up into logically different categories...is very valuable for anyone planning a curriculum if only because it makes us think harder about just what differences in method or style of thinking do actually exist in various subjects. (p. 10)

But many secondary teachers in the Caribbean and other countries seem too content with content. More recently, Hinchman (1984) examined the perspectives held by secondary teachers toward content area reading. Through extensive classroom observations and interviews, he found that these teachers viewed reading merely as a means by which students cover material required in the curriculum. Smith and Feathers (1983) essentially arrived at similar conclusions in their study of content area reading practices. They observed that reading was simply not an important component of teaching or learning in the classrooms investigated. Rather, teachers who were wedded to a discipline, walked the tightrope between content and process. For many of us, experience has shown that in some classrooms the textbook is the curriculum, and the teacher adheres to its organizational pattern and content presentation faithfully. In classroom settings where this is the case, the textbook is the teachers’ primary source of information. However, although textbook pages are assigned in classrooms, Vacca and Vacca (1986) pointed out that teaching students how to read to learn did not frequently enter the lesson plans of teachers.

Implicit in the above observation by Vacca and Vacca is the fact that many content area teachers assume the ability of students to contend with the concept loadings of textbook material. Students are expected to stretch to fit the reading requirements of textbooks. Teachers seem to plan more for their content than for their students. Viewed another way, students must accommodate the textbook instead of the textbook being made to accommodate them. It is probably true to say that the need to get through the curriculum continually resides in the minds of many secondary teachers.

Among the few examples of empirical evidence to support functional content area reading instruction, is Vacca’s (1975) report of an investigation conducted with seventh grade social studies classes. Vacca used a non-equivalent control group design in which the main
intervention comprised the use of prepared reading guides in small
groups within the structure of social studies lessons. He concluded that:

The functional reading strategy not only appeared to have a significant effect on students’ ability to recognize patterns of organization in expository paragraphs, but also seem to positively influence their acquisition of social studies content and had a qualified effect on their achievement in reading in social studies. (p. 108)

Another study by Stoodt and Balbo (1979) furnishes evidence that students taught study skills integrated with economics content, achieved significantly higher grades than did the control group who received instructions in economics only. Guthrie (1978) found experimental support for presenting outlines and teaching students outlines before reading to aid in the recall of specific information, and using outlines after reading to remember and to make inferences about that content. It would appear that experimental validation of functional reading strategies is a relatively recent area of educational research and that further investigation on the effectiveness of specific strategies is needed (Herber, 1978; Patberg, 1979; Vaughn & Gaus, 1979). The functional content-centred philosophy of secondary instruction is summarized by Herber as follows:

Reading is taught in content areas when subject area teachers teach their students what they require to read as they read it. The instruction is provided by regular classroom teachers within regular subject areas as a natural part of the curriculum. (1979, p.3)

The acquisition of teacher competencies for the implementation of content area reading instruction is contingent on content area teachers’ attitude to that instruction. It would seem that most of the journal articles dealing with training programmes focusing on content area reading instruction, underscore Shuman’s statement (1978) that if attitudinal barriers are not addressed in the first instance, it is doubtful that any programme designed to help teachers deal with the reading-related demands of the curriculum content can succeed. A number of studies investigating the attitudes of secondary teachers toward teaching reading to learn skills in
content areas (Lipton & Liss, 1978; Usova, 1978) revealed that attitudes differ according to subject area. Usova (1979) later discovered that reading specialists had significantly more favourable attitudes than either principals or content area teachers.

However, except for Flanagan's (1975) study, secondary teachers' attitudes towards reading instruction in the content areas of the curriculum were generally negative. Consider some descriptions of, and explanations for, these negative attitudes. Content area reading instruction is often regarded as a threat and/or an intrusion (Smith, Otto, & Hansen, 1978). Teachers may feel incompetent to cope with the task, perceive it as contributing to role overload, or simply think that it is irrelevant to their content areas. Smith (1976) suggests that secondary teachers invariably define reading narrowly—relating it only to decoding, syllabication and recall of information. Lipton and Liss (1978) observed that low scores of content teachers on an attitude measure, rather than being indicative of negative attitudes, may conceivably reflect lack of understanding that there are specific learning to read skills specific to their content areas, in addition to the more general reading skills. Shuman (1978) contends that many teachers remain elitist in their approaches to education and in their attitudes towards providing reading instruction in the secondary classes. However, in an earlier article Shuman (1975) points out that teachers are not really indifferent to students reading to learn needs, but perceive themselves as unequal to the task, especially when confronted with remedial students.

In the Caribbean generally, secondary teachers' attitude to content area reading instruction has been fashioned to a large degree by the content-focus of their training. Much of the research elsewhere would also seem to support the view that a major contributing factor is the kind of teacher education programme which puts almost total emphasis on the trainee's knowledge of content. This is reflected in Usova's (1976) observation as follows:

The secondary teacher is not prepared to teach reading. We are often the product of traditionalism of thought in education. Because [secondary] teachers view reading instruction primarily as an elementary subject, they react negatively to it...Teachers feel pressured to cover their subject and not waste time. (p. 252)
Herber (1979) is optimistic with respect to teachers' attitude and qualification by pointing out that they are becoming increasingly sensitive to students' deficiencies in ability to understand resource materials in the subject areas. However, he qualifies this optimism by suggesting that the creation of a successful content area reading instruction programme necessitates that teachers study the reading process and apply the knowledge to their teaching methods. According to Shuman (1975), teachers in content areas are poorly equipped, especially at the remedial level. Usova (1976), in reiteration, notes that secondary teachers are not prepared to cope with the reading-related problems of their content area because relatively few teacher training institutions require secondary education majors to pursue a course in content area reading instruction.

While the above observations emanate from North America, we in the Caribbean are not unmindful of these curriculum-related issues. Morris (1985) in her discussion of problems related to the modern language curriculum in the Caribbean, and Trinidad in particular, mentions that the "most serious problems to be faced" in changing that curriculum "would seem to be attitudinal" (p. 51). She contends that while the body of knowledge that the students must master warrants identification, this knowledge is useless unless students possess the skills of "listening, speaking, reading and writing" necessary for using the knowledge. Morris then suggests that "change in methodology" is as important as "change in curriculum content". It was an awareness of this need for change in both curriculum content and methodology that guided the initiatives to include a content area reading instruction component in the new three-year secondary teacher education diploma programme in Jamaica as of September 1981.

The Reading Curriculum Component For The Secondary Pre-Service Teachers

A primary concern of the new curriculum thrust for Jamaica's teacher training programme in 1981 was the necessity to prepare the secondary education major trainees to manage the reading related problems affecting learning in their content area instruction. This concern emerged against the background of the increasing incidence of poor academic achievement among secondary school students, whose major problem had been identified over the years as their inability to comprehend information from textbooks, subject resource materials, and class lectures.
A promising feature of the ethos for curriculum change in the teacher training programme was majority acceptance on the part of the college lecturers to effect some balance between content and methodology. Subject area Boards of Studies, comprising all lecturers from the eight teachers' colleges, were commissioned by the Joint Board of Teacher Education (JBTE) to develop curriculum for four training programmes: Special Education, Early Childhood, Primary and Secondary. Although the Joint Board of Teacher Education, constituting representatives from the teachers' union, Ministry of Education, and the Department of Teacher Education Development of the Faculty of Education, had responsibility for the broad policy making, it was the teacher-trainers who were the de facto agents of the curriculum change. As Morris (1985) observed "without the teacher's total involvement from the initial stages, any attempt at curriculum change will flounder" (p. 50).

Since content area lecturers had previously assumed responsibility for the methodology of their specialist areas, it was now much easier for the reading methodology lecturers to consult with the former in implementing reading instruction in the secondary training programme. Reading specialist lecturers were able to learn about the concepts and technical vocabulary peculiar to the content areas. They were also better able to use the resulting knowledge in designing and implementing the reading courses for the secondary student teachers. The content area lecturers, on the other hand, acquired some understanding of, and were more sympathetic to, the instructional strategies related to managing the reading problems of their subject areas. It was out of this collective participation that a reading instruction component was built into the training programme for the secondary teachers. As Farrell and Cirrincione (1986) suggest:

If collaboration between reading specialists and content area teachers is essential for reading competence to be widely achieved in secondary schools, then reading methods instructors and methods instructors in content areas must co-operate in the preparation of secondary teachers. (p. 723)

Not all content area lecturers have been responsive to the idea, let alone the practice, of including a reading instruction component in the teacher training programme. Some have accepted it only in principle. Others have welcomed it with cautious optimism as they remain wedded to their
specialist areas and continue to walk the tightrope between content and methodology.

Assumptions

The reading courses developed for the secondary student teachers were guided by two basic assumptions. The first is that, to the extent that content area teachers employ the medium of print and other graphic materials as tools for instructional purposes, they should be trained to accept responsibility for, and be competent in, assisting their students to deal efficiently with the reading tasks of the various curricular disciplines. The assumption here is that direct teacher guidance is necessary to ensure student application of the specific reading to learn skills required, by different materials and for different purposes, in the content areas of the curriculum. Further, if these skills are to be meaningfully applied, then they are most appropriately introduced and taught in content area classrooms where they are immediately needed. The second is that reading to learn is a process rather than a subject, and is influenced by the interaction of what Vacca and Vacca (1986) refer to as meaning sources in the classroom, namely: "the teacher, the student, and the text" (p. 4). An important aim of the reading instruction component of the teacher training programme, therefore, is to encourage the secondary student teachers to view content area reading as a process (not as an additional subject in the curriculum) by which their students are driven by the discovery of meaning to pursue knowledge. In this process they as teachers have an active role to play.

Emphasis of the Training

The reading instruction training programme comprised two course components. The first, designated The Fundamentals of Teaching Reading, was now required of all secondary student teachers during the first year of the three-year training programme. Formerly, this course was required only of student teachers pursuing the Early Childhood and Primary programmes. This course aimed at familiarizing the student teachers with the nature of the reading process and how to use the resulting knowledge to help pupils acquire meaning from the printed word or symbol. As specified in the Syllabus for Developmental Reading (1985) the objectives are as follows:
1. To equip student teachers with the necessary skills that will make them efficient in teaching children to learn to read;

2. to develop an understanding of the multifaceted nature of the reading process;

3. to develop an understanding of the developmental and interrelated sequence of skills in the teaching of reading;

4. to guide teacher trainees in the production, preparation and use of reading materials; and

5. to guide teacher trainees in a critical appraisal of the basal readers used in schools and an understanding of the instructional strategies suggested in them. (p. 2)

The teacher training programme for this course focused on instructional strategies designed to develop reading skills in the following three areas of learning to read: (a) Word Recognition Skills; (b) Word Meaning Skills, and (c) Comprehension Skills.

The major emphasis of the training programme, however, is represented in the rationale and aims of the second course: Content Area Reading Instruction. This course is offered during the second year of the programme and lasts for an entire semester. Given the significance of reading to learn in the secondary school curriculum, the course is designed to acquaint the secondary student teachers with reading problems in general, and those which are peculiar to studying and learning in the various content fields in particular. To the extent that learning in these content fields involves reading to learn, the course attempts to train the student teachers in instructional strategies aimed at facilitating learning in the content areas. Within this framework, the aims of the course are inclusive of the following:

1. To develop greater understanding and appreciation of the role of the secondary school teacher in managing the reading problems related to reading to learn in his/her content area;
2. to identify problems related to the content delivery systems of textbooks and other reading materials used in content area instruction;

3. to adopt content area resource materials to students' reading ability through diagnostic prescriptive teaching techniques; and

4. to develop classroom learning strategies for the application of study techniques to reading in the content fields. (p. 7)

The Content Area Reading Instruction course has both theory and practicum components complementing one another. Accordingly, it provides theoretical and practical training in the following areas, inter alia: (a) Teaching vocabulary and concept development—the symbols, specialized and technical vocabulary of the subject areas; (b) teaching the use of graphic aids—charts, graphs, tables, maps, pictures and cartoons; (c) teaching previewing, outlining and note-taking strategies; (d) teaching text design and format, using readability checklists, and (e) application of each of the above when they relate to content area lesson planning and execution.

Conducting the Training

In each teachers' college, the theoretical component of the content area course involved lecture, discussion and modeling sessions. During these sessions, interactions between lecturer and student teachers provided opportunities for understanding and demonstration of the instructional strategies relating to the areas specified above. For instance, under the Teaching of vocabulary and concept development, the lecture and discussion sessions would emphasize that a student's reading vocabulary must assimilate many types of words. Firstly, structure words or transition words predetermine the facility of students to access and assimilate ideas expressed in content textbooks. Such structure words, depending on the organizational writing pattern, would include: to begin with, firstly, secondly, next, finally; however, but, as well as, on the other hand, similarly; because, consequently, nevertheless, accordingly, if ... then, not only ... but also. These are but representative examples. Secondly, each content area has its own specialized vocabulary. Attention during these sessions would, therefore, be directed to the special vocabularies of science, mathematics,
history and geography. These vocabularies create problems posed by the multiple meanings conveyed by many commonly used words. Such words would include: base, mode, root, cabinet, acute, set, union, cell, colon, power, product, to name just a few. Finally, there is the technical vocabulary related to a particular subject area, with which students must gain familiarity if they are to experience success in reading to learn, for example, octagon and centrifugal force in mathematics and science respectively. Teaching strategies related to these problems would therefore receive attention.

During the modeling sessions which followed lecture and discussion, the lecturers would demonstrate the instructional strategies to be applied in the teaching of the particular content area reading skills. Individual pre-service teachers would then be required to practice teach these strategies using their peers as students. They would subsequently engage in micro-teaching sessions using students recruited from secondary schools within the particular college neighbourhood. The same pattern of training would be adopted in the activities related to all areas of the course specified under (a), (b), (c), (d) and (e) above.

An extremely important aspect of the training involved instructing the pre-service teachers to design, administer and interpret the Content Informal Reading Inventory (IRI). The Content IRI is primarily designed for diagnostic-prescriptive teaching in content area and is aimed at establishing the match between the students' reading ability and the readability level of the content textbook. In other words, the purpose of the Content IRI is to ascertain how well students in a particular class will cope with that text, and what reading to learn skills need to be given attention. An advantage of the training is that the pre-service teachers were able to use representative samples of content material actually used in the neighbouring schools, in preparing themselves for content area instruction. In a recent article, Gillock (1988) observed that content area materials in the classroom can be "motivational to secondary special need students, provided that the materials used are the ones they are currently responsible for in their content area classes" (p. 724).

In all eight teachers' colleges, the practicum component of the course required the pre-service teachers to do an eight-week teaching practice in secondary schools across the country. The practicum was designed to
determine the extent to which the pre-service teachers incorporated the training into their teaching. Assessment of the pre-service teachers during the practicum, therefore, focused on how they addressed the reading related problems impinging on teaching and learning in the content areas.

From Training to Practice

Training secondary pre-service teachers in content area reading instruction is but the initial stage in any attempt to effect change in the general attitude of teachers toward this aspect of instruction in the curriculum. Incorporating and implementing content area reading instructional strategies is the next stage. First of all, some degree of sustained monitoring during their early years of teaching will be necessary to ascertain the degree to which the newly trained teachers have applied the strategies learnt to their subject teaching. Secondly, the reaction of older teachers to the application of these teaching strategies in the secondary school classrooms must be recognized. This will be the case especially where older teachers are the heads of subject departments, and wield at least an implicit influence on instructional strategies in their subject areas. Accordingly, successful implementation of content area reading instruction will be contingent on collaboration and constructive engagement among all content area teachers, administrators and reading specialists.

The career stage of veteran secondary school personnel might determine how receptive they would be to the adoption of content area reading in their instructional strategies. If customs die hard, older customs will die harder. The degree to which secondary teachers are content with content is an important factor with which to contend.

But what of in-service training? Prior to deciding about participation in the design of any staff development programme in content area reading, it will be important to take time to question the outcome. Invariably, dissatisfaction with in-service programmes is attributable to failure to come to grips with the real intention of the programme. Indeed, if the purpose is unclear, it follows that the programme’s relevance to participants will be less apparent.
Staff development in content area reading will actually commence when the needs of teachers are identified. There is a sense in which an in-service programme in content area reading instruction is an individual matter—it grows from within the curriculum of a school system, based on the individual needs of teachers and their students. In addition to minimal financial resources and other problems, staff development programmes have been beset largely by lack of staff receptiveness. Nevertheless, where continued professional growth and improved instruction in content area are the payoffs, well planned and implemented staff development is worth the effort.

References


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