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## Ten Recommendations from Research for Teaching High-Risk College Students

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*ABSTRACT: Finding practical ideas about college reading that have been drawn from theory and research is difficult for most veteran instructors, but it is even more difficult for the beginner unaware of professional organizations and journals. This problem of dissemination is exacerbated by the fact that there are very few formal university programs that focus on the training of college reading specialists. Consequently, the authors of this article decided to generate a list of their own "best ideas" that they have culled from their years of teaching college reading. These 10 ideas, though not comprehensive, represent a synthesis of research and theory. More importantly, they are ones that have made a difference in the performance of the authors' students. In addition, the authors have purposely cited many scholarly sources in order to provide an extensive bibliography for colleagues new to the field.*

Formal college reading and study programs have been with us since the early days of the 20th century when schools such as Harvard (Moore, 1915), the University of Chicago (National Society for the Study of Education [NSSE], 1920), and the University of Illinois (Stone & Colvin, 1920) observed the need to promote students' advanced reading and learning skills. Furthermore, over the past century more than 600 texts and workbooks have been published for use by instructors and students in college reading programs (Stahl, Hynd, & Brozo, 1990). Of equal importance, reports of research with college readers dating back to the Victorian Era (Abell, 1894) can be found in the literature. Hence, the profession has a time-honored history of program development, curriculum innovation, and published research of which we can be proud.

On the other hand, the primary vehicles for disseminating pertinent theory, research, and practical teaching ideas have been rather diffuse and have changed routinely over the years. Moreover, the profession has yet to develop the same rigorous training requirements and credentialing generally expected of our peers in elementary or secondary education. Although recently several "generalist"-oriented degree programs focusing on developmental education have evolved, formal training programs at the level of the terminal degree are all but nonexistent for the college reading and learning professional.

Indeed, many of us serving in the college reading and learning field entered through a side door and developed expertise through a self-help program based on personal reading, conference attendance, peer interaction, etc. (see Mealey, 1991; Simpson, 1983; Stahl, Brozo, & Gordon, 1984 for discussion). While we each may have a background in reading pedagogy, in most cases the focus of our initial training was at the elementary or secondary levels since credentialing programs typically ignore the special needs of the college learner.

As an example of this assertion, recently one of the authors was talking with a colleague new to teaching high-risk college students. She had never heard of this journal, nor the other journals sponsored by organizations such as the International Reading Association, the College Reading Association, or the College Reading and Learning Association. Her experience reminded us again that the first few years of teaching in a college reading and learning program can be overwhelming. Practical ideas enmeshed with

theory and research are difficult to find for most veterans, but even more difficult for the beginner who is unaware of professional organizations and journals. So we decided to create our own "best ideas" for our new colleagues and for other interested novices. Though not comprehensive, these 10 ideas have made a difference in our teaching of college students. We present these ideas in an order that moves from broader conceptualizations of pedagogy to the more practical concerns of the educational program.

### **Adopt a Cognitive-Based Philosophy**

Many college programs either explicitly or implicitly emphasize a deficit model of reading instruction drawn from the diagnostic-compensatory movement. In this case, the short-term goal becomes teaching students specific skills that they have not yet mastered (i.e., recognizing the main idea or the author's tone of a selection). The long-term goal becomes student improvement on a standardized reading test such as the ubiquitous Nelson Denny Reading Test or a state mandated reading exam as used in Texas, Georgia, New Jersey, etc. Unfortunately, many students can learn to excel on reading tests to the degree necessary to exit a developmental program but still not fully function as independent learners in the academic milieu of higher education. That is, the teaching of discrete reading skills rarely transfers to students' immediate and real tasks (i.e., the mastery of concepts and complex principles in their college courses). More importantly, the deficit model can stigmatize and demoralize college freshmen who are eager to leave the trappings of high school and begin college-level work. The cognitive model has proven to be an effective alternative to the deficit model.

Most cognitive psychologists maintain that effective learning is more the result of internal structures and processes than of external influences such as materials, teachers, and instructional sequences (Resnick, 1981). The cognitive model posits that college students are, or should be, active participants in control of their learning; they are self-regulated, autonomous, and good strategy users (Harri-Augstein, Smith, & Thomas, 1982; Pressley, 1986; Thomas & Rohwer, 1986; Zimmerman, 1986). Common to all these labels is the operational definition of effective independent learners as those who plan, implement, and control the study strategies that enhance learning. Since most college students are not efficient and effective independent learners (Weinstein & Rogers, 1984), the most logical goal for college reading and learning programs would be to teach students a repertoire of strategies and tactics that will prepare them for the tasks and texts they encounter in college.

Students need to learn more than how to develop and when to employ the strategies, however. They also need to learn how to transfer specific strategies to the particular academic literacy demands of each course. Indeed, without effective training for transfer, college reading and learning courses face the very real danger of standing in isolation from the academic disciplines and of remaining mired in the deficit model.

### **Use a Course Model that Stresses Transfer**

Strategy transfer occurs more naturally when students have a chance to practice the newly learned strategies on their own texts and with tasks perceived to be "real." In many mandated reading courses, such as developmental studies programs or bridge programs, typically students are not enrolled concurrently in a credit-bearing, content-area course that allows for this transfer. Hence, instructors should consider teaching strategies through a simulations model (King, Stahl, & Brozo, 1984; Nist & Hynd, 1985).

The goal of such a model is to replicate the tasks and texts of a typical required, lower division course (e.g., history, psychology). Because the transfer mandates close simulation of the chosen course,

students must purchase the course's textbook and supplemental materials. Then throughout the simulation experience, they must read and study the chapters as the instructor teaches the domain-specific study strategies. Students can also receive practice in taking lecture notes with appropriate videotaped lectures or guest lectures from professors who regularly teach the targeted course. During the lecture presentations, the instructor should model good notetaking strategies on an overhead projector. The end point of the simulation experience is passing an examination like that encountered in a regular course. When students exit the simulation course, they take with them a physical product (annotated text, lecture notes), a cognitive product (greater prior knowledge and experience), and several domain-specific and general study strategies.

For students enrolled concurrently in credit-bearing, content-area courses, the learning specialist should implement an instructional model that permits each student to become a strategic learner with the content and the materials encountered in a course of his or her own selection. Throughout the term as each learner is introduced to and practices with various strategies and tactics, he or she develops a portfolio of materials (e.g., course notes, concept cards, graphic organizers, process guides, course exams) demonstrating the mastery of the content course's goals and also the development of the individual's successful repertoire of learning strategies.

While at first glance it may appear that the number of possible student choices for a target course might make this model unwieldy, the realities of the undergraduate curriculum for the lower division student greatly limit the breadth of courses in which one may enroll. Hence, our experience suggests most students will elect to employ the strategies and tactics you introduce to a handful of introductory, survey courses such as Psychology 100, Sociology 100, Anthropology 100, U.S. History 100, etc. In fact, we have discovered that the range of options is so limited that the instructor may easily introduce forms of cooperative learning through the constitution of content-specific cluster groups and learning triads or dyads.

A second model for promoting transfer of learning strategies for students enrolled in content classes involves the development of more formal ties between the academic program and reading/learning strategy course. Over the past decade this model has been labeled either supplemental instruction (Martin, 1980), adjunct or paired courses (Mallery & Bullock, 1985), the language study model (Sartain et al., 1982), or the learning counseling model (Garfield & McHugh, 1978). Basic to all of these models is the premise that the content of the reading or learning strategy instruction or mentoring is tied to a credit-bearing course that freshmen or sophomores typically take (e.g., biology, geography, or history). The instructor of the reading and learning strategies does not teach the content of the content course nor supplant the role of the professor in presenting the content. Rather, the reading/learning specialist teaches processes and strategies necessary to succeed in the targeted course in seminars or sessions held outside of class. These specially arranged sessions may be voluntary or required, depending upon the institution and the professor involved with the program.

While the new member of our profession may not be in a position to implement such a program initially, there is value in being cognizant of the "paired course" program (Bullock & Madden, 1986) that limits enrollment in a rather traditional yet theme-oriented (e.g., psychology, sociology) study strategies course to those students enrolled in the respective academic speciality. Since all the students in a particular section are going through similar academic experiences, study strategy training can be focused on specific tasks and thus can improve the possibility of transfer. Regardless of which models of course delivery are employed, the measures of success must focus on the transfer of learning strategy training. Hence, we present our next idea or recommendation.

## **Use Reliable, Process-Oriented Assessment Procedures**

Many college reading programs rely on standardized reading tests to place students in programs and to assess their strengths and weaknesses after placement (Simpson & Nist, 1992). In addition, these tests are often used to evaluate the success of a program by determining whether the students significantly improve their reading level or their comprehension and vocabulary scores. In some situations, the standardized test may even determine whether students can exit the mandated program. Rather than an over-reliance upon standardized measures that are typically product oriented, instructors should consider the use of assessment procedures that reflect the reading/learning tasks students will be required to undertake in lower division courses. One way such process-oriented assessment can be accomplished is through simulation of a typical learning process.

In undertaking this simulation, the instructor might distribute to students an introductory chapter from a sociology text on a Monday with the assignment to prepare for an objective and essay examination over the material on Friday. Then on exam day the instructor would collect the chapter and materials the student used for study, ask the students to summarize briefly how they studied and for how long, and then administer the examination under normal exam conditions. Before handing in the examination, students could report what grade or percentage they think they will receive on the exam (Sartain et al., 1982). Thus, the instructor has collected a variety of process information from the students: (a) copies of their chapters, which may reveal any markings; (b) tangible products of their self-selected strategies such as maps, outlines, jot lists, etc.; (c) self-reports on their method(s) of study; and (d) measures of their metacognitive awareness of performance.

To evaluate the students' processes of study, instructors can use checklists enumerating the attributes of effective text marking and study strategies (i.e., mapping, charting). For instance, Simpson and Nist (1990a) have developed one checklist for text annotation that allows the instructor to determine whether the students use text structure to identify and organize superordinate and subordinate ideas and whether they translate information into their own words. Similarly, Stahl, King, and Henk (1991) have developed a checklist for evaluating lecture notes. These checklists, based on cognitive theory and research, allow the instructor to quickly evaluate student-generated materials and thus to see strengths, needs, and patterns in an organized manner.

To evaluate the products of study, instructors can score the objective and essay questions, noting differences in scores between the two measures. In addition, a holistic evaluation of the essay could provide an additional measure of students' abilities to articulate a clear understanding of content and relationships among superordinate and subordinate ideas. The results of these process and product assessments can then be shared with students in small groups or in individual conferences.

However, if after mastering successful studying processes the students still earn low test scores, the problem may not be ability to implement strategic learning or to draw upon metacognitive awareness, but rather weak background knowledge of the subject being tested. Such is not an unusual situation with developmental learners who underwent a secondary school experience that left them underprepared or misprepared for the academic literacy demands of postsecondary learning. Naturally, then, the learning specialist must think of ways to help students develop a broadened worldview supportive of college success.

## **Broaden Conceptual Background Knowledge**

Most students required to take a college reading course can read but are not efficient and effective

independent learners. Because these students are often aliterate and suffer wide gaps in their prior knowledge, they are not generally prepared to read regularly, widely, or critically. Furthermore, many of these students have not been required to undertake higher level reading/learning tasks while in the secondary school (Alvermann & Moore, 1991). Hence, the instructor must meet the needs of students who have both deficiencies in content knowledge and misconceptions about the learning process. Moreover, as recent research has demonstrated in a college freshman level history course (Simpson & Nist, 1990b), students may even have misconceptions about specific content areas.

Obviously, such problems cannot be overcome in one course, but instructors can intervene by promoting the habit of reading extensively through the creative use of periodicals such as *Newsweek*, *U.S. News and World Report*, or *Time* during the weekly classroom routine. In addition to discussing selected articles, instructors or students could select general vocabulary words such as *ameliorate* and *exacerbate* or any of the regularly used idioms, allusions, and foreign terms identified and presented by Boese (1986) for study.

As another alternative, instructors can provide higher level background experiences while teaching students to learn about a specific theme (e.g., "coming of age," "the American experience," "personal courage") or concept by using or adapting Bartholomae and Petrosky's (1986) "basic reading/basic writing" model. In such a model, basic readers undertake extensive reading of five to six texts with a similar unifying issue. Furthermore, since each text builds upon the previously read book, the student's conceptual understanding of the theme and his or her relationship to it grows in progressive degrees of sophistication. In addition, greater facility with various forms of discourse is promoted as the student moves from the more comfortable narrative forms of text to the expository forms generally encountered in lower division courses. Along with the extensive readings, the learner is expected to undertake carefully integrated writing assignments, in both formal and expressive modes.

Such a program is indeed time consuming for all involved—both student and instructor. Still, the age-old adage is true: One becomes a better reader by reading extensively. Unfortunately, many of the students enrolling in developmental course work report to us that they simply were not required to read in high school. Hence, it is not surprising that the reading load encountered in college or the level of vocabulary required is troubling to our students. The basic reading/basic writing model clearly helps to prepare the students for the former. Now let us turn to the latter issue.

### **Reconceptualize Vocabulary Development**

Students entering postsecondary education need to understand from the outset that the fundamental avenue for academic success is the ability to quickly expand their vocabulary (Simpson & Dwyer, 1991; Stahl, Brozo, & Simpson, 1987). Instructors must provide experiences that immerse students in (a) the "language of the academy" or the terminology that allows the institution to function (e.g., terms such as *provost*, *bursar*, *financial aid*); (b) the "language of the educated" or the advanced general vocabulary used by scholars as they communicate; and (c) the specialized "languages of the disciplines" (Sartain, 1981) or those unique technical terms, symbols, etc. that permit scholars within a field to communicate effectively. Students also must understand that, learning these words means more than the rote memorization of a brief definition; it implies conceptual understanding of words. With conceptual understanding, students know multiple definitions, examples, characteristics, synonyms, and antonyms and are able to apply the word and its variant forms (e.g., *zealous* versus *zealot*) in a variety of situations (Simpson & Dwyer, 1991).

To help students master the vocabulary in the first category, instructors can draw heavily upon the institution's printed materials, particularly the college catalogue and student handbook. Effective strategies for developing greater vocabulary fluency in the second category include generative vocabulary activities such as Haggard's (1982) "self-collection strategy," Beck's (personal communication, 1979) "word of the week," and Pauk's (1984) "frontier system." Finally, instructors can teach students how to learn technical vocabulary by using activities such as Sartain et al.'s (1982) "technical vocabulary log for study triads" or Simpson, Nist, and Kirby's (1987) "concept cards."

Vocabulary development, like other instruction, calls for innovative teaching. But instructors may spend unnecessary time (and disappointment) reinventing strategies that have already been tested. Without relinquishing their own creative expertise, instructors need to be aware of, and use, research-validated strategies.

### **Use Research Validated Learning Strategies**

Instruction with textbook study systems (e.g., SQ3R, PQRSST) has been a staple of the college reading/learning program for over 50 years (Caverly & Orlando, 1991; Stahl & Henk, 1986). Still, many of the methods and strategies presented to college students have yet to be validated credibly by research or have been researched with students atypical of the population served in mandated developmental courses. More research needs to be conducted with high-risk college students, especially research concerned with student processes rather than research comparing one strategy to another.

While the research base is not as large as with younger students, a few strategies have been validated with high-risk college students. For example, after training students to use textbook annotation, Simpson and Nist (1990a) reported developmental students performed significantly better than an equivalent control group on three different content area exams. More importantly, the annotation group reported spending less time studying for those three exams. Another promising strategy, PORPE (Simpson, 1986), was developed to help students prepare for essay examinations. With PORPE, students **Predict** potential essay questions to guide their studying; **Organize** key ideas that answer those predicted questions using their own words, structure, and methods; **Rehearse** key ideas; **Practice** the recall of those key ideas in self-assigned writing; and **Evaluate** the completeness, accuracy, and appropriateness of the essays by means of a checklist. These five steps are synergistic as they build upon each other and lead learners through the cognitive and metacognitive processes essential to successful independent learning. PORPE has been validated in three investigations (Simpson, Stahl, & Hayes, 1988; Simpson, Hayes, & Stahl, 1989; Simpson, Hayes, Stahl, Connor, & Weaver, 1988) involving high-risk college students trained to employ the strategy while studying Introduction to Psychology textbook chapter excerpts. For additional descriptions of validated learning strategies pertinent to high-risk college students, see the recent International Reading Association Monograph, entitled *Teaching Reading and Study Strategies at the College Level*, edited by Flippo and Caverly (1991).

It is not enough simply to introduce students to proven strategies. As instructors, we must also be sure that we train students how to use them and how to choose among them. This is an onus that has often been overlooked as college reading specialists have attempted to provide great breadth of content coverage but often not enough depth with instruction. Let us then turn to the training issue.

### **Systematically Train Students to Employ Strategies**

One of the primary goals of the college reading instructor should be to train students to be able to select, modify, and transfer a variety of strategies to their own learning tasks. To accomplish this goal,

self-control training (Brown, Campione, & Day, 1981) is essential. Students who have received self-control training not only "know" a strategy, but they also have knowledge of the conditions under which the strategy is appropriate and why it is appropriate. Paris, Lipson, and Wixson (1983) refer to this type of knowledge as conditional knowledge. In contrast to this systematic type of training is the most prevalent form of training, labeled blind training by Brown et al. (1981). Students receiving blind training in a strategy are not as likely to learn why, how, or when to use a strategy but instead tend to blindly imitate the instructor. With blind training students will not be as likely to transfer the strategies they learned to their own learning tasks.

Validated training approaches and models (Garner, 1988; King & Stahl, 1985; Nist & Kirby, 1986; Pressley, 1986; Stahl, King & Henk, 1991) are numerous, but they do agree that instruction should be direct, informed, and explanatory. In other words, students can be trained to employ a strategy if they receive intensive instruction over a reasonable period of time that is characterized by (a) strategy explanations and rationales (i.e., steps/tactics, advantages, performance enhancement issues, appropriate time and use considerations); (b) strategy modeling and talk throughs by the instructor; (c) examples from real tasks and texts that students will encounter; (d) guided practice with real texts, followed by immediate and specific feedback and correction; (e) debriefing sessions that deal with questions, student doubts, and fix-up strategies for difficult concepts; (f) frequent independent practice opportunities across appropriate texts; and (g) guidelines on how to evaluate a strategy's success or failure.

Training sequences such as these can help students with the declarative and procedural knowledge about strategy use. That is, such instruction will help students learn the what, how, and why of strategy employment. Once students master the declarative and procedural knowledge of a strategy, instructors must then consider the issues of strategy control and self-regulation. With our next idea we will address this important concern.

### **Promote Strategy Control and Regulation**

To be effective independent learners, college students need to be able to control and regulate the strategies they employ. Such control is a critical aspect of metacognition that involves learners in planning, monitoring, and evaluating a plan of action across a variety of tasks and texts (Kluwe, 1987). Unfortunately, research has demonstrated consistently that most college students, and particularly those at risk, lack the abilities to plan, monitor, and evaluate their own learning (Weinstein & Rogers, 1984). Practically speaking, this means that college instructors should teach their students to (a) define tasks, establish goals, and allocate resources; (b) make a plan of action that incorporates the appropriate strategies and distributes time; (c) activate and monitor the plan of action and make appropriate changes, when necessary; and (d) evaluate their plans success or failure in terms of goals and the task in order to plan for future situations. In addition, to have strategic control, students must have a repertoire of strategies to choose from so they may select and adapt the most appropriate one to the specified task and text.

Though difficult to obtain, strategic control and regulation can be facilitated when instructors use cognitive-based course models that emphasize systematic training and realistic transfer opportunities. In addition, strategies such as PLAE (Simpson & Nist, 1984) can help students and instructors operationalize these metacognitive processes. PLAE is a research driven, recursive model that involves students in four stages of mastering strategy control and regulation. In stage 1, **Preplanning**, students define the task and set performance goals by answering a set of guiding questions. In stage 2, **Listing**, students list the most appropriate strategies and construct a task-specific study plan that outlines their

specific goal for each study session, the amount of time they predict it will take to reach their goal, and where they will study. In stage 3, **Activating**, students implement and monitor the plan, making adjustments if their plans are not working. Stage 4, **Evaluation**, occurs after students have received their test scores. Students evaluate their performance by diagnosing errors and looking for patterns of strengths and weaknesses. Students then use this information as they plan for subsequent tasks (e.g., exams). PLAE has been successful with high-risk college students in improving their metacognition and test performance across a variety of content areas (Nist & Simpson, 1989).

Strategies such as PLAE are among the most valuable students can learn. But learning how to use them effectively also requires time and practice. Unfortunately many developmental-level students may not be motivated to expend such effort until they encounter immediate success with and benefits from the strategies they are learning in the reading and learning class. A number of other strategies offer more direct benefits to college learners in shorter instructional time.

### **Use High-Utility Strategies for Immediate Acceptance**

Experienced instructors realize that many students enter required reading/study strategies courses with negative attitudes about having been assigned to a "remedial" class. Consequently, rather than starting the term with processes that may take several weeks or all term for students to reap benefits from (e.g., scheduling and prioritizing activities), instructors can begin by teaching a high-utility strategy that promotes immediate transfer to other course work. Instruction on how to take notes from lectures (Stahl, King, & Henk, 1991) or how to read and remember information from text through annotation (Simpson & Nist, 1990a) provides such an avenue to immediate use and probable course success. Once students realize that there is value in these strategies and develop a degree of trust in the instructor as a mentor, they are more apt to accept with equal value those techniques such as scheduling and planning activities which might seem a bit "preachy" or those methods such as multistep textbook study systems that require both time and effort to master.

Indeed, being careful not to overlook the student's vantage point is of importance in designing a postsecondary reading/learning program. Yet we must be careful not to be so myopic in our desire to produce better readers and learners that we forget that there is power in integrating reading with writing activities in the developmental learning program. Many instructors, however, overlook the value of writing to teach reading, either as a step in a strategy or by itself.

### **Incorporate Writing into the Curriculum**

Writing aids students in becoming cocreators of the texts they read, in creating their own articulated understanding of content material, and in providing a means of monitoring and revising that understanding (Hayes, Stahl, & Simpson, 1991). For instance, to elicit background knowledge before a reading assignment, the instructor could ask students to freewrite on the general subject of the assignment, to write down all the questions the reading passage's title brings to mind, or to skim the passage and then freewrite on what they predict the passage will say or formulate questions or objections to what they think will appear in the passage. The instructor could also ask that, as students read, they pause for 3 minutes before going on to the next main heading (or if no headings appear, after every couple of pages) to summarize what they have just read, to write down questions about what remains unclear, or to respond personally to what they have read. An instructor could have students reflect on an assignment during a 10-minute writing before class discussion of key concepts. Not only do such writing activities engage students in the reading material, but they afford students an



opportunity to monitor their understanding and to contribute more actively and knowledgeably to discussions (Hayes, 1990). In a sense, writing about reading assignments turns the reading process inside out, exposing readers to the inescapable constructivist activity of creating meaning in and from words.

A growing body of research supports the benefits of incorporating writing within the reading curriculum. Best known, perhaps, are studies showing that having students write summaries of reading selections can improve their reading comprehension and recall abilities (Brown, Day, & Jones, 1983; Johnson, 1982; Taylor & Berkowitz, 1980). Analytic writing has proven to engage students with reading material in even more cognitively complex ways (Langer & Applebee, 1987; Marshall, 1987). Such written analysis, and its concomitant thinking, leads students to forge connections among the various levels of generality in a reading passage as it also engages them in (re)creating coherent text structures. Daily reading logs and directed writing activities have been shown to increase remedial college students' reading comprehension and writing abilities (Hayes, 1987). The process of writing, then, can be an effective means of making sense of the written product.

### Conclusion

These 10 recommendations certainly do not begin to touch on all that a beginning instructor of reading and learning strategies should know. They do provide a beginning point for the novice. At the least, they offer some practical ideas for the classroom and provide some direction for further exploration. We also hope that they reinforce a commitment to teaching reading and learning as holistic, complex processes, not as discrete, simplistic skills.

Professional growth is a continuing process that comes with the deliberate decision to be part of the professional community of postsecondary reading and learning specialists. This is the professionalism that has been required of all of the nation's developmental educators whether they be serving in community colleges, liberal arts colleges, or universities or whether they be employed in developmental programs, learning assistance centers, or Educational Opportunity Programs. This is the professionalism that comes with the ongoing reading of our professional journals and literature, and with the regular attendance at and participation in the local, state, regional, and national conferences offered throughout the year. This is the professionalism that is fully formed when one understands and appreciates Manzo's (1983) conception that college reading and learning is both a generator of new ideas and a repository of considerable wisdom. Yet, most of all, it is a level of professionalism that comes shining through the first time you share your own pedagogical knowledge of our field with a new member of the field who also wishes to be known as a college reading and learning specialist.

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