

PRACTISING COLLEGE READING STRATEGIES

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Abstract

This research aims to point out the main Reading/Comprehension strategies applied by Higher Education first -year students during their daily learning academic tasks and their major difficulties in this field. The research process consists in a measuring frequency Lickert scale questionnaire completed by 1,000 students from four of the main Portuguese state universities from science and engineering courses. From a whole set of strategies presented, the students had to refer to their reading habits and purposes, concentration levels during reading, comprehension rates, information detection and management techniques, support instruments usage, quotation and opinion exchange and doubt solving with teachers and foreign language (English) comprehension levels. Reading/Comprehension level groups were formed according to the competence and abilities of the students. Results seem to indicate that the majority of the students had an intermediate level of proficiency in this field. In fact, students tend to use general strategies connected with their specific academic tasks and study habits. However, results appear to indicate that students tend to avoid the usage of strategies that involve interaction with teachers and more specific strategies that may control/determine their academic writing tasks and that imply a higher scope of proficiency.

INTRODUCTION

One of the many problems students face nowadays is not their inability to read but their lack of interest, indifference or rejection of reading. Studies based on reading habits have particularly focused on the importance of the promotion of specific strategies to: capitalize on their interests, make reading materials accessible, build a conducive environment, allow time to read in school, provide significant adult models and use motivational techniques (Clary, 1991). The prevention of coping strategies by students who lack literacy skills has been the focus of a research on the identification of teacher behaviours that correlate with student achievement, as well as on teachers' perceptions of and reactions to students' behaviours and on students' usage of these coping strategies (Brozo, 1990)

Another problem is a severe lack of autonomy by the students as readers in accomplishing the goals of their readings. As it is stated by Kletzien & Bednar (1988), too often students approach reading assignments with no idea of why they are studying or what they are supposed to learn relying on what they were told by the teachers. These two researchers state that students are not used to taking control of their own reading and that they are lacking in metacognition, knowledge, and control of the four variables: person, goal, task, and strategies (Baker & Brown, 1984; Flavell, 1979).

Metacognition is precisely the subject of a study conducted by Lindquist-Sandmann (1987), which consists in developing metacognitive strategies with high school students never forgetting the psycholinguistic implications of the whole process. These implications are specially connected with what Perin (1988) identified as the schema activation in literacy instruction and in the effectiveness of the comprehension process.

This study presents activities for teaching reading comprehension, which, according to the authors, have to fulfil two conditions that appear to be highly important for keeping students interested in their academic tasks: the use of their knowledge of the world and their active participation in learning. In this same field many other studies have tried to identify and explain the process of the activation of background knowledge, all having the *schema* theoretic model of reading (Anderson & Pearson, 1984) as a working basis.

Also in the psycholinguistic scientific field, Gardner & Smith (1987) have produced a body of research that suggests that some students may not enjoy reading because of a basic psychological problem: the lack of the ability to take the perspective of another person, which can affect their enjoyment of literature and their ability to understand what they have read. This relationship between the reader and the text has also been studied by Sager (1989), who states that reading demands a quality of engagement beyond the application of skills and processing of text and that students need not only to decode the text but also to think through

it and experience it, anticipating, questioning, appreciating, puzzling over, confirming, being curious about, imagining.

In order to identify the problems associated with the use of these strategies, to help the students in their assignments and to promote active comprehension, many support programmes and a vast set of research studies have been developed by specialised organizations like the Center for the Study of Reading at the University of Illinois at Urbana – Champaign, the National Reading research center funded by the Office of Educational research and Improvement in the United States of America, and the College Reading Association .

College reading comprehension programmes in some universities have also been the basis for the elaboration and publication of study guides specially directed to students.

In McWhorter's reading and study guide (2001) the author emphasizes the importance of critical thinking approaches to reading and of study as an active learning process. The author presents the basic techniques for college success, including active reading and note taking, offering strategies for strengthening literal and critical comprehension, improving vocabulary skills and developing reading flexibility, using methods for reading and learning from textbook assignments and for taking exams.

Wong (2000), Walter Pauk (2001) and Hopper (2001) have also developed guides for students where we can find exercises and explanations on particular techniques for taking useful notes, reading in an effective way and retaining a textbook assignment. The same goal had already led Marzano & Paynter (1994) to publish a guide on the new approaches to literacy to help students to develop their reading and writing skills based on their work with teachers on the effectiveness at enhancing the key literacy skills and on the survey of this research. Shapiro (1996) developed another kind of study based on a wider approach to the

subject that concerns the general academic skills problems of the students designed not only for students and instructors but also for psychologists and reading and curriculum specialists.

It is also interesting to refer to more instructional compendiums on reading strategies and practices, specially for teachers, developed by Tierney & Readence (2000) and Greenall & Swan (1986), which have been used in graduate and undergraduate support programmes.

In fact, there are numerous studies about reading and study strategies of higher education students and many have focused, using different approaches and methodologies, precisely on many Reading/Comprehension specific strategies as the visualization of content in a text, main idea identification, vocabulary assimilation, key words detection, context usage, the use of mnemonics for memorization and highlighting, the use of dictionaries and grammars, and so forth.

Some of these studies have found that the most successful individuals understand and use a variety of active study strategies to control and monitor their learning (Garner 1987; Yaworski, 1998), applying particular strategies only when appropriate and that these students can also explain the strategies they use and can describe whether or not particular strategies prove to be useful in particular situations (Ruzic, 2001).

RESEARCH QUESTION

This study deals with the strategies used by first year students in their reading/comprehension and learning activities. We aim to evaluate the frequency associated to each one of the strategies and focus on delineating levels of competence in this field.

METHOD

Subjects

The subjects of this study were 1,000 first year students (freshmen), who were equally distributed among the several degree courses in science and engineering degree courses of four of the Portuguese main state universities (University of Aveiro, University of Minho, University of Algarve and University of Porto).

This sample refers to about 30% of the total number of first year students in these specific scientific areas of those institutions; About 58% of the subjects were female and 42% were male aged between 17 and 29 years old.

Instruments and Measures

According to the goals of this specific research topic we built a 15 items questionnaire concerning the major reading/comprehension strategies which students may apply during their learning activities.

All the items from this questionnaire asked the students to rate their performance (frequency in the use of each presented strategy) on a 5 point Lickert scale (1 - never; 2 - rarely; 3 - sometimes; 4 - very often; 5 - always).

Procedures

The questionnaire was applied at the beginning of the second semester (March 2001) during one of the several scheduled lectures of each course. Since students belonged to different classes, they were instructed to answer focusing on their own course and academic experiences. Students were assured that their responses would remain confidential and that only the researcher would have access to them. The students read the instructions and filled in the complete questionnaire.

RESULTS

Internal reliability of the questionnaire was initially carried out by calculating the Cronbach “alpha” coefficients. The scale showed a reasonably high level of internal consistency ($\alpha=0.8522$ $r > 0.7$).

For the item total statistics data indicate that the scores for alpha if each item is deleted is situated in a range from 0.83 to 0.85 also showing high levels of reliability. The items analysed in their reliability corresponded to the items that students rated on a five points scale in terms of a frequency level. Table 1 presents the percentages and means of each one of the 15 items.

Table 1: Percentages and means of the Reading/Comprehension questionnaire.

	Items	1	2	3	4	5	Mean
1	I read for reasons related to my academic activities;	2.2	13.5	39.7	30.9	13.7	3.40
2	I read as a hobby;	2.8	21.2	31.1	29.4	15.5	3.34
3	I am able to concentrate while reading	0.8	5.9	27.2	42.2	23.9	3.82
4	I understand the texts I read;	0.3	4.6	24.7	46.1	24.3	3.90
5	I understand texts written in English;	2.7	21.1	30.7	29.5	16.0	3.35
6	I use context to find out the meaning of a word/expression;	1.2	5.8	25.7	41.3	26.0	3.85
7	I use dictionaries and encyclopedias;	1.8	20.4	29.7	29.5	18.6	3.43
8	I assimilate the new vocabulary;	0.2	5.7	40.3	43.0	10.8	3.59
9	When I don't understand an expression/sentence I read it again;	0.6	3.0	19.6	41.3	35.5	4.08
10	I can find the key words of a text;	0.9	9.1	45.3	36.9	7.8	3.42
11	I can point out the main ideas of a text;	0.1	2.2	27.2	54.2	16.3	3.84
12	I can separate what is important in a text from what is not important;	0.1	3.0	33.4	48.4	15.1	3.75
13	I solve my doubts/ exchange opinions with my teachers about /texts I read;	17.1	44.5	29.8	6.4	1.8	2.30
14	I memorize contents through reading;	1.8	16.0	45.3	31.3	5.6	3.23
15	I quote from the books I read;	18.9	38.9	28.4	11.0	2.8	2.40

1=never; 2=rarely; 3=sometimes; 4= very often; 5=always

Bearing in mind the research purposes and aiming to evaluate the competence in Reading and Comprehension skills by the subjects, we ran a frequency analysis and averaged the item responses to create a variable score for each one of the subjects of the sample.

According to each subject's score on the questionnaire, a percentage was calculated. For the 15 items with a 5 point scale the minimum score would be 5 (0%) and the maximum would be 75 (100%).

Each score value was first turned into percentage and then into a four level competence scale: Level 1= 0%-24%; Level 2= 25%-49%; Level 3= 50%-74%; Level 4= 75%-100%.

The research question of this study concerned the study of the main Reading/Comprehension strategies used by the students during their learning and their level of competence in this field.

DISCUSSION

The Use of Reading/Comprehension Strategies

In order to make a deep analysis and a clear approach to the research question, the items from the questionnaire were grouped together according to their content.

The first two items are connected with the reading habits of the students I read for reasons related to my academic activities (item 1) and I read as a hobby (item 2). Looking at the data we can see that students read more often for reasons connected with their academic activities. However, we must point out the fact that reading as a hobby has high levels of response by the student, very close to those of the item which refers to reading as being motivated by academic reasons.

Items 4 and 5 were associated because both relate to the students' ability to understand the texts they read (item 1- I understand the texts I read and item 2 - I understand texts written in

English). From the results we can conclude that the majority of the students state that they understand very often or even always the texts they read (very often=46.1% and always=24.3%). However, when it comes to the understanding of texts in a foreign language (English) the figures clearly show that almost half of the students choose the two higher options (45.5%). A visible contrast that clearly defines the two items is the fact that about 23.8% indicate that they never or rarely understand texts in English when only 4.9% indicate those frequency options for understanding texts in a general way.

The specific strategies in the process of comprehension for dealing with difficulties were presented in four specific items: I use context to find out the meaning of a word/expression (item 6), I use dictionaries and encyclopedias (item 7), When I don't understand an expression/sentence I read it again (item 9), I solve my doubts/ exchange opinions with my teachers about the books/texts I read (item 13). From these four items, the ones with the higher level are the ones related to the usage of context and rereading, both with 41.3% of the subjects choosing option four (very often). Even between these two strategies we can find some differences if we analyse the fact that the first has 26.0% and the second 35.5% in option five (always) which means that rereading is the main strategy used by the students among the ones presented in the questionnaire. The role of dictionaries/encyclopedias in the subjects' learning and comprehension activities is characterized by values which indicate that there is about the same number of choices in items 3 and 4 (about 29%). This central tendency is corroborated by the fact that also about the same levels of choice are situated in a mean of 19% in options 2 and 5. The strategy with the lowest level of proficiency by the subjects is the one which implies the interaction with teachers to solve doubts or to exchange opinions about texts. In fact, option 2 (rarely) has 44.5% of the subjects' choices, which is reinforced by the 17.5% of option 1 (never).

Associated with the level of competence in Reading/Comprehension we can find five items: I am able to concentrate while reading (item 3), I assimilate the new vocabulary (item 8), I can find the key words of a text (item 10), I can point out the main ideas of a text (item 11), I can separate what is important in a text from what is not important (item 12). In a general way, all these items present high levels of usage situated in choice 4 with levels around 40%. The item with the highest levels is the one of pointing out the main ideas of a text (options 4 and 5 make about 70%) followed by more specific items which have to do with concentration during reading (options 4 and 5 make about 66%), the separation of what is important in a text (options 4 and 5 make about 63%) and with assimilation of vocabulary (options 4 and 5 make at about 53.8%). The item with a less expressive result, is the detection of keywords, is also the more specific item of this group of competences (option 3 has almost half of the choices). Finally, we studied the results of two items connected with the role of Reading and Comprehension in higher education study habits and academic performance: I memorize contents through reading (item 14); I quote from the books I read (item 15). This group puts together two items with distinct natures and implications and therefore with different results. The memorization of the contents show a strong intermediate tendency (almost half of the choices – 45.3%) supported by a 31.3% level in option 4. About the quotation from texts results indicate that more than half of the subjects *never* or *rarely* have developed this activity.

If we examine the items according to their scores we may do another approach to the subject.

For the never (option1) or rarely (option 2) options the items with the highest scores correspond to items 13 I solve my doubts/ exchange opinions with my teachers about the books/texts I read and 15 I quote from the books I read.. On the contrary, the items with the

lowest scores for these two options were items 11 I can point out the main ideas of a text and 12 I can separate what is important in a text from what is not.

In option 3 (sometimes) the highest scores come from items 10 I can find the key words of a text, 14 I memorize contents through reading, 1 I read for reasons related to my academic activities and 8 I assimilate the new vocabulary and the lowest scores from items 9 When I don't understand an expression/sentence I read it again, 4 I understand the texts I read and 6 I use context to find out the meaning of a word/expression. The fourth option (very often) had its highest scores in item 11 I can point out the main ideas of a text, 12 I can separate what is important in a text from what is not important; and 4 I understand the texts I read and the lowest on items 13 I solve my doubts/ exchange opinions with my teachers about the books/texts I read; and 15 I quote from the books I read. Option number 5 (always) had its highest scores in item 9 When I don't understand an expression/sentence I read it again, and 6 I use context to find out the meaning of a word/expression and the lowest in items 13 I solve my doubts/ exchange opinions with my teachers about the books/texts I read and 15 I quote from the books I read;

Levels of competence in Reading/Comprehension

Table 2 presents the number of subjects in each level of competence. Results seem to indicate that the great majority (69.1%) have a level 3 of competence in this field. The two levels corresponding to negative performances together have 19.6% of the subjects, which contrasts with the 11.3% with a high level of proficiency.

Table 2: Reading/ Comprehension competence levels

Competence Levels	Frequency	Percent
1	8	0.8
2	188	18.8
3	691	69.1
4	113	11.3
Total	1000	100

CONCLUSIONS

As it is usual in this kind of studies, there was an enormous amount of data and, because of the sheer number of analyses carried out, some results may emerge. Nevertheless, some general conclusions do seem possible.

First, this kind of questionnaires appears to be a useful instrument in this study field. The reliability of the scale seemed to be appropriate and brought validity to the study. The simplicity of the items also facilitated the approach to the theme and the most relevant analyses were chosen to be presented here.

The main purpose of the present study was to examine the use of strategies by the students. Results concerning the students reading habits have shown that students read for academic purposes almost as much as they use reading as a hobby. These levels are considerably high and this relative proximity is somehow surprising and indicates a specific preference for this activity. The items that have to do with the ability of the students to understand texts in general and texts in English have different results, which indicates that students consider that they have a medium-high level of proficiency in understanding texts in general (mean=3.90) and a high but less expressive result for texts in English (mean=3.35).

Data indicate that among the strategies presented to the students the less used have to do with the interaction with teachers and with quotation from books. The intermediate levels of usage are characterised by the presence of specific strategies of comprehension, which are directly related to the academic tasks and study habits (keywords detection, memorization of contents and new vocabulary through reading). The strategies with higher levels of usage are rereading, main ideas detection, meaning analysis through context.

From these data regarding the use of strategies we can see that students use mainly plain and easy access strategies which do not involve a great deal of effort and motivation and that approach texts and their contents in a superficial way.

Indeed, skills proficiency, according to this study seem to be considerably medium-high: 69,1% of the subjects have a positive performance based on the questionnaire.

With these findings we aim to contribute to the development of a background on reading and comprehension in college and on the relevance of this skill for the students daily academic tasks and for their performance and achievement.

References

ANDERSON, R.C, HIEBERT, E.H., SCOTT, J.A. & WILKINSON, I.A. (1986) Becoming a Nation of Readers. Washington, DC: The National Academy of Education, The Center for the Study of Reading.

ANDERSON, R. & PEARSON, P. (1984) A schema theoretic view of basic processes in reading comprehension. In Handbook of Reading Research. P. David Pearson (ed). New York: Longman.

Author (1986). A Leitura como um processo de desenvolvimento e aprendizagem à luz das estruturas de “schème” e de “skill”. Porto Alegre. Educação, Ano IX, 35-54.

Author (1988) A Leitura como um processo de resolução de problemas. Aveiro. Universidade de Aveiro. CIFOP.

Author et al. (1995) Levels of Success of first years students in first degree courses on science and engineering at the University of Aveiro, In Jane L. Lambert & Trudy W. Banta- Proceedings of the seventh International Conference on assessing quality in higher education. Indianapolis, Indiana University, Purdue University, Indianapolis.

- BAKER, L. & BROWN, A. (1984) Metacognitive skills and reading. P. Pearson (Ed), Handbook of reading research. New York: Longman.
- BROZO, W. (1990) Hiding out in secondary content classrooms: coping strategies of unsuccessful readers, Journal of Reading, February 1990, 324-328.
- CLARY, L. (1991) Getting adolescents to read, Journal of Reading. February 1991, 340-345.
- DEAVERS, R. (2000) The effect of instruction on early nonword reading strategies, Journal of Research in Reading, October 2000, 23, 267-286.
- FAIRBAIRN, G. & WINCH, C. (1996) Reading, Writing and Reasoning. Buckingham: Open University Press.
- FISHER, R. (2000) Progress and performance in National Literacy classrooms. Journal of Research in Reading, 23 (3), 256-266.
- FLAVELL, J. (1979). Metacognition and cognitive monitoring: a new area of cognitive-developmental inquiry. American Psychologist, 34, 10, 1979, 109-118.
- FLOOD, J. (ed) (1984) Understanding Reading Comprehension: Cognition, Language and the structure of Prose, Newark, Delaware: International Reading Association.
- GARDNER, M. & SMITH, M. (1987) Does perspective taking ability contribute to reading comprehension? Journal of Reading, 30, 4, 333-336.
- GARNER, R. (1987) Strategies for reading and studying expository text. Educational Psychologist, 22, 3-4, 299-312.
- GREENE, B. (2001) Testing reading comprehension of theoretical discourse with cloze, Journal of Research in Reading, 24 (1), 82-98.
- GRELLET, F. (1987) Developing reading skills – a practise guide to reading comprehension exercises, Cambridge: Cambridge University Press.

- GREENALL, D. & SWAN, M. (1986) Effective reading skills for advanced students. Cambridge: Cambridge University Press.
- IRVIN, J. (1989) Promoting active reading comprehension strategies. Englewoods Cliffs: Prentice Hall.
- KIERAS, D. & JUST, M. (1984) New Methods in Reading Comprehension Research. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- LINDQUIST-SANDMANN, A. (1987) A metacognitive strategy and high school students: working together, Journal of Reading, January 1987, 326-332.
- LUTTRELL, W. (2001) High school students' literacy practices and identities and the figured world of school, Journal of Research in Reading, 24 (3), 235-247.
- KLETZIEN, S.& BEDNAR, M. (1988) A framework for reader autonomy: an integrated perspective, Journal of Reading. October 1988, 30-33.
- MCWHORTER, K. (2001) College reading and study skills (8th ed.), London: Longman Publishers.
- MARING, G.; SHEA, M. & WARNER, D. (1987). Assessing the effects of college reading and study skills programs: a basic evaluation model, Journal of Reading. 5, 402-408.
- MARZANO,R. & PAYNTER, D. (1994) New approaches to literacy- helping students develop reading and writing skills, Washington: American Psychological Association.
- MCINNIS,C.; HARTLEY, R. (2000)Trends in First Year Experience in Australian Universities. Melbourne. Centre for the Study of Higher Education. University of Melbourne.
- ORASANU, J. (1986) Reading Comprehension: from research to practice. Hillsdale (NJ): Lawrence Erlbaum Associates.
- PASCARELLA, E. & TEREZINI, P. (1991) How college affects students. San Francisco: Jossey Bass.
- PAUK, W. (2001) How to study in college. Boston (MA): Houghton Mifflin Company.

PEARSON, P; KAMIL, M.; BARR, R. AND MOSENTHAL, P. (1984) Handbook of Reading Research, New York: Longman.

PERIN, D. (1988) Schema activation, cooperation and adult literacy instruction, Journal of Reading. October 1988, 54-62.

REX, L. (2001) The remaking of a high school reader, Reading Research Quarterly, 36,(3), 288-314.

RUZIC, R. (2001). Lessons for everyone: how students with reading- related learning disabilities survive and excel in college courses with heavy reading requirements, Paper presented at the Annual meeting of the American Educational Research Association, Seattle, Washington.

Retrieved August29, 2001 from URL <http://www.cast.org/udl/LessonsforEveryone1540.cfm>

SAGER, M. (1989) Exploiting the reading-writing connection to engage students in text, Journal of Reading. October 1989,40-43.

SHAPIRO, E. (1996). Academic skills problems- direct assessment and intervention. New York: The Guilford Press

SHEEHAN-HOLT, J. & SMITH, M. (2000) Does basic skills education affect adults' literacy proficiencies and reading practices, Reading Research Quarterly, 35, (2), 226-243.

SMITH, F. (1982). Understanding Reading. New York: Holt, Rinehart and Winston.

SPIRES, H.& STONE, P. (1989)The directed note taking activity: a self- questioning approach, Journal of Reading, October 1989, 36-39.

STAHL, S. & COMMEYRAS, M. (2001) Reading reading research: a multivocal review. Reading Research Quarterly, 36,(1), 74-85.

TIERNEY, R. & READENCE, J. (2000) Reading strategies and practices: a compendium. Boston (MA) : Allyn Bacon Publishers.

UPCRAFT, M.;GARDNER, J. & ASSOCIATES (1989) The first Year Experience. San Francisco, California: Jossey-Bass Publishers.

VAN DIJK,T. AND KINTSCH,W .(1983) Strategies of Discourse Comprehension. London: Academic Press.

YAWORSKI ,J. (1998)Why do students succeed or fail ? a case study comparison. Journal of College Reading and Learning. 29,(1), 57-72.

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