The promotion of academic literacy in higher education: The course Reading and Writing for the Production of Academic Knowledge

Abstract: Despite the recognition of the difficulties of many students, their training in the field of academic literacy has no tradition in higher education in Portugal. There are, however, some approaches dealing with it. The course Reading and Writing for the Production of Academic Knowledge, taught to undergraduate students at the University of Minho, is an example of these approaches. This course places the issue of academic writing in the broader framework of academic literacy. It aims to make students aware of the specific uses of academic language in their field of study and promote their understanding of the role of reading and writing in knowledge construction and dissemination. The course Reading and Writing for the Production of Academic Knowledge assumes a practical nature to facilitate the appropriation of academic genres by engaging students in academic language practices within their learning context and by using the specific texts of their disciplines.

Keywords: academic literacy; reading; writing; knowledge construction.
LA PROMOCIÓ DE L’ALFABETITZACIÓ ACADÈMICA A L’EDUCACIÓ SUPERIOR: EL CURS “LECTURA I ESCRIPTURA PER A LA PRODUCCIÓ DE CONEIXEMENT ACADÈMIC”

Resum: Malgrat que molts estudiants admeten dificultats en aquesta àrea, la seva formació en alfabetització acadèmica no té tradició a l’educació superior a Portugal. No obstant això, trobem algunes accions al respecte. El curs Lectura i Escriptura per a la Producció de Coneixement Acadèmic, impartit a la Universidade do Minho per a estudiants de pregrau, és un exemple d’aquests apropaments. Aquest curs posa el tema de l’escriptura acadèmica en el marc més ampli de l’alfabetització acadèmica. El seu objectiu és conscienciar l’estudiantat sobre els usos específics del llenguatge acadèmic en la seva àrea d’estudi i promoure la comprensió del paper de la lectura i l’escriptura en la construcció i difusió del coneixement. El curs Lectura i Escriptura per a la Producció de Coneixement Acadèmic pren un caràcter pràctic per facilitar l’apropiació dels gèneres acadèmics en involucrar l’estudiantat en les pràctiques acadèmiques del llenguatge dins del seu context d’aprenentatge i utilitzant els textos específics de les seves disciplines.

Paraules clau: alfabetització acadèmica; lectura; escriptura; construcció del coneixement.

LA PROMOCIÓN DE LA ALFABETIZACIÓN ACADÉMICA EN EDUCACIÓN SUPERIOR: EL CURSO “LECTURA Y ESCRITURA PARA LA PRODUCCIÓN DE CONOCIMIENTO ACADÉMICO”

Resumen: A pesar del reconocimiento de las dificultades de muchos estudiantes, su formación en el campo de la alfabetización académica no tiene tradición en la educación superior en Portugal. Hay, sin embargo, algunos acercamientos sobre la cuestión. El curso Lectura y Escritura para la Producción de Conocimiento Académico, impartido en la Universidad de Minho para estudiantes de pregrado, es un ejemplo de estos enfoques. Este curso coloca el tema de la escritura académica en el marco más amplio de la alfabetización académica. Su objetivo es concienciar a los estudiantes sobre los usos específicos del lenguaje académico en su campo de estudio y promover su comprensión del papel de la lectura y la escritura en la construcción y difusión del conocimiento. El curso Lectura y Escritura para la Producción de Conocimiento Académico asume un carácter práctico para facilitar la apropiación de los géneros académicos al involucrar a los estudiantes en las prácticas académicas del lenguaje dentro de su contexto de aprendizaje y utilizando los textos específicos de sus disciplinas.

Palabras clave: alfabetización académica; lectura; escritura; construcción del conocimiento.
Introduction

Reading and writing are deeply involved in the processes of knowledge construction. Consequently, students’ performance has a lot to do with their competencies in these areas, that is, with the texts they read and write and with how, by reading and writing, they participate actively and fully in a context in which texts and their uses play a crucial role in the construction of meaningful learning.

The role of reading and writing in producing knowledge is associated with the need to shape knowledge within the framework of textual genres with specific characteristics, which presupposes mastery of the standards used in a given scientific domain to shape the respective knowledge. Thus, academic performance is not only a matter of content knowledge but also implies knowing how to understand and produce the texts which convey that knowledge. Learning specific content is a matter of language, the process by which experience is translated into knowledge. Therefore, each disciplinary content area corresponds to a specialized language, specific texts and appropriate ways of reading and writing them (Dionísio et al., 2011).

In fact, since the 1970s, we have been witnessing a growing recognition of the role that reading and writing, as learning tools, play in the school context and their implication in the transmission and construction of knowledge. This recognition has been mainly expressed in the scope of some movements, some of a more comprehensive nature, namely the Writing Across the Curriculum, Writing in the Disciplines, and Academic Literacies movements (Bazerman et al., 2005; Lea & Street, 1998; Russell et al., 2009; Tynjälä et al., 2001), others of a more specific nature, i.e., within a particular disciplinary field, such as the movement designated as Science Writing Heuristics (Hand, 2004; Hohenshell & Hand, 2006; Keys, 2000).

Along with recognizing the relevance of the uses of reading and writing in the academic context, we often hear references to the difficulties that higher education students show in these same language uses. These difficulties have been identified in research work carried out worldwide, using quantitative and qualitative methodologies, covering different samples regarding the years and levels of education and the scientific areas attended. In general, we may conclude that there are problems in different dimensions of the processes of reception (in the selection of relevant information and the organization of notes taken during oral presentations, as well as in the reading of scientific texts, with a clear tendency towards the mere reproduction of sources), elaboration (in the reorganization and synthesis of information from different sources) and expression of acquired knowledge (in the expression in their own words of information collected from written sources and in the use of the conventions of academic writing for the reference and citation of sources) (Boch & Piolat, 2005; Carrasco & González, 2011; Carvalho & Pimenta, 2007; Vega López et al., 2013).

These problems are not exclusive to the undergraduate levels and can also be identified in master’s students (Carvalho, 2012). In the Portuguese context, problems associated with academic writing are recognized by both students and teachers (Barbeiro et al., 2015; Carvalho, 2019; Carvalho et al., 2018; Pereira et al., 2013).

Academic literacy is a little-explored field in Portugal, and institutional proposals for the creation of curricular spaces aimed at the development of students reading and writing skills are
rare. Some of them integrate the syllabus of undergraduate courses in some disciplinary fields, namely Languages and Humanities; others take the form of short courses aimed at first-year students, who still have little awareness of the problem and, therefore, cannot fully understand the nature and scope of the objectives pursued; there are also cases in which training in the area of academic literacy is done through optional disciplines in undergraduate and graduate programmes that students can choose.

At the University of Minho (Portugal), the opportunity to design and offer a course on academic literacy arose with the creation of the UMinho Option. This optional course integrates the syllabus of all the graduation programmes of the University. The creation of this optional course stemmed from the understanding of the University programmes as projects that aim at the complete preparation of students, providing them not only with mastery of specific knowledge in scientific and professional areas but also with the development of transversal skills, considered fundamental for their full development as persons, citizens and professionals.

These optional courses are expected to promote creativity and critical thinking, relevant aspects for analysing contemporary problems, generating innovative and sustainable solutions and students' full and active participation in society. Thus, they must focus on instrumental skills, such as communication and time management; interpersonal skills, emphasizing the ability to work in interdisciplinary teams and multicultural contexts; systemic skills, emphasizing creativity, initiative and entrepreneurship.

Reading and writing skills have this nature, being involved in students' performance, underlying the knowledge construction processes. They are also an essential requirement for the full insertion of the individual, as a citizen and qualified professional, in the varied contexts in which he participates or will join throughout his/her life.

Therefore, the UMinho Option appeared as a natural context for the design and offer of *Reading and Writing for the Production of Academic Knowledge*, a semestral course on academic literacy in Portuguese. Corresponding to 6 ECTS units, the course has one class of two hours per week over 15 weeks. Each semester, it involves up to 50 students from different areas of study, namely Engineering, History, Music, Architecture, Biology, and Physics, among others.

1. From the definition of the objectives to the course implementation
   1.1 Course objectives and syllabus

We defined the course's objectives based on the theoretical perspectives presented above. We intend, therefore, that, by attending this course, students can:

- Understand the specificity of the academic context by recognizing its characteristic language uses;
- Identify the roles played by reading and writing in the academic context;
- Identify and characterize the text genres used in their field of study;
- Recognize the specificity of reading and writing practices within their disciplinary domain;
Use writing as a learning tool for knowledge reception, elaboration and expression; 
Develop reading and writing skills regarding academic and scientific texts.

The course syllabus includes the following aspects:

- The role of reading and writing in academic contexts.
- Academic genres:
  - The concept of text genre;
  - Specificity and diversity of academic genres.
- Reading strategies for knowledge acquisition:
  - From decoding to the development and integration of prior knowledge.
- Writing as a learning tool:
  - Writing to register information (such as note-taking and reading logs);
  - Writing to organize and elaborate knowledge.
- Writing and knowledge expression and dissemination:
  - Writing in tests or exams;
  - The production of academic text genres;
- The representation of scientific discourse:
  - Referencing and citation procedures.

Considering what we have said so far, it is essential to consider the nature of the content or knowledge focussed on in this course. Differently from what happens in many other courses, the content/knowledge of this course is not what we call *declarative or semantic* knowledge, that is, knowledge through which the student learns or grasps a particular object, as revealed in the knowledge that society has already made available about it. Therefore, we cannot intend that the teaching/learning processes of the course regard the student as the depositary of knowledge whose possession may be demonstrated by its mere expression or declaration before the teacher. On the contrary, the contents of Reading and Writing for the Production of Academic Knowledge constitute procedural knowledge, i.e., skills that the student should be able to apply in school life and beyond in space and time. Unlike declarative knowledge, the acquisition and development of these skills occur in the subject's sphere and will translate into actions that will be performed throughout his or her life (Barbeiro, 2003; Carvalho & Barbeiro, 2013).

All this naturally impacts the options regarding the implementation of the course and the design of the activities that take place in it. Thus, the procedural nature of its content/knowledge implies a practical approach to the course, which cannot be dissociated from the context under study (the academic context). From this perspective, reading and writing skills development must be based on effective practices (Carlino, 2013), i.e., purposeful practices that occur in a context. This context is an objective reality that conditions the use of texts, a space for sharing practices and knowledge that allow us to give them meaning and interpret them; it is a "sphere of human activity in which texts are the result and, at the same time, an instrument of mediation" (Camps, 2005, p. 21).

The notion of context is relevant to the definition of the concept of genre, either in the Bakhtinian perspective that consider genres as "more or less stable forms of enunciation that
shape and are shaped by the verbal interaction of people who share the same context of communication" (Camps, 2005, p. 24), or in the systemic functional approach that characterize the “genre as a staged goal-oriented social process." (Martin, 2009, p.13).

Thus, in this course, reading and writing practices are developed, as much as possible, around texts that students use in the scope of other disciplines of their programme and take into account the processes of knowledge construction that take place there. The use of texts within the scientific domains of the students’ programmes is also the result of the recognition of their specificities, which imply specific ways of reading and producing them. Assuming this specificity, the appropriation of the characteristics of the genres through the analysis, at different levels, of exemplary texts of the genres emerges as a primary objective of the course, in recognition of the importance of the role of reading in the development writing skills, in line with the most recent proposals in the field of the didactics of writing, both those that derive from the socio-interactionist studies of the Genève group (Pereira & Cardoso, 2013; Schneuwly & Dolz, 2004) and those that emerge in the context of the Sydney school (Gouveia, 2014; Rose, 2012; Rose & Martin, 2012).

Another principle underlying the implementation of the course is the recognition of the critical role of metacognition in the development of language use competencies. It is, therefore, essential that students become aware not only of the contexts of language use and the characteristics of the texts involved but also of the various processes involved in this use so that they can make appropriate decisions regarding the options they face in the development of reading and writing practices.

A third aspect implied in the definition of the course and assumed in its designation, objectives and contents has to do with our understanding of knowledge production and how it involves language. The process of knowledge construction includes three moments: the reception of information from different sources, especially oral presentations and written texts; the elaboration of knowledge; the expression of knowledge, in most situations associated with evaluating what is learned.

Based on these three principles, we designed learning a route that starts with characterizing the academic context by describing the language practices that occur there; then, it moves on to identifying the respective academic text genres and their description.

Afterward, the work developed in the course is seen in terms of knowledge reception, elaboration and expression processes, highlighting the role of writing as a learning tool.

Regarding information reception, the focus is, first, the issue of gathering information from oral presentations, paying particular attention to the problem of note-taking, and then, from written sources, highlighting the comprehension processes within the framework of reading practices for the acquisition of knowledge and the construction of reading notes.

We then move on to the dimension of knowledge elaboration, emphasizing the processes of synthesizing information gathered from various sources, in which graphic organizers can play a leading role.
Finally, we address the question of knowledge expression by analysing different contexts of text production for knowledge assessment, their implication in text construction processes, and the characteristics of the texts. We also discuss the issue of the implication of source texts in the construction of academic text genres, working on reference and citation processes, the inherent conventions, the factors that determine the choice of a reference style over another, taking the contexts of production, editing and circulation of scientific texts into account.

1.2 Students’ assessment

The student's assessment in any curricular unit must be articulated with the implemented teaching-learning processes, which, in turn, should derive from the objectives defined at the outset.

In the case of the course Reading and Writing for the Production of Academic Knowledge, the objectives refer to the development of reading and writing competencies or skills involved in knowledge reception, elaboration and expression in an academic context. Such competencies are made evident through the performance of tasks involving the reading and production of texts configured in various text genres. They imply being aware of the characteristics of the contexts in which academic literacy practices occur, the texts involved in those practices, and the processes underlying reading and written production and their role in the learning process. Equally relevant is the awareness of one’s learning within the discipline, that is, the student's perception of the extent to which learning outcomes are achieved.

In this perspective, all the work done in the course is relevant for assessment, so the student should gather the products resulting from each task performed in a portfolio framed by reflective texts in which the student explains the learning achieved by its realization. The use of portfolios as an assessment tool arises from the processual nature of the curricular unit contents. The students' learning cannot only be demonstrated through products delivered after its conclusion. Its assessment requires the consideration of elements that show how students carry out the tasks and the progressive development of the skills they involve. In addition, the use of the portfolio reflects the recognition of its virtues as an assessment tool. Vieira and Moreira (2011, p. 53) highlight these considering using a portfolio as a "strategy that favours the documentation of experience and the integrated development of criticality, self-direction and creativity/innovation skills, facilitating access to transformation processes." Furthermore, the development of the portfolio in interaction with others, namely with the teacher, involves reflection and the consequent awareness of the learning constructed and its relationship with previous knowledge and integrates evidence, duly and consciously selected, of these learnings. Thus, the portfolio is an instrument of the student's assessment and an element that enhances these learnings.

One task is particularly relevant when constructing this portfolio: synthesizing several sources (4 texts at least) in one text, which implies the whole process of reception, elaboration and expression of knowledge. Therefore, students must include three different types of products in the portfolio:

- a reading note for each of the texts, including the respective keywords;
- a scheme/text plan showing how the keywords and the correspondent ideas retrieved from the different texts are related;
a synthesis text (between 1000 and 1500 words), which should highlight the implication of the source texts, through reference and citation processes and their listing in a bibliographical reference section, with the adoption of the reference style in use in the student’s field of studies.

1.3 Students’ perceptions of their achievements in the course

Developing literacy skills involves individual cognitive characteristics and participation in genuine and meaningful literacy practices. Such development also requires the student’s awareness of the nature of the tasks he or she is involved in and of his/her performance regarding the skills the course aims at developing and the course objectives. Thus, students’ perceptions of the course contents and learning achievements are relevant.

In order to identify these perceptions, we designed a Likert scale questionnaire that included items concerning: a) how relevant students consider different topics that integrate the course syllabus; b) how they perceive their improvement concerning each of those items.

Questions focussed on:

- Describing the structure of different academic text genres;
- Referring to source texts when writing a text;
- Quoting source texts when writing a text;
- Writing the bibliographic reference of a source text according to the reference style used in the student’s field of study;
- Understanding the role of writing in knowledge construction;
- Taking notes during oral presentations (classes or conferences);
- Using strategies to highlight relevant information while reading a text;
- Elaborating reading notes;
- Summarizing a text;
- Elaborating schemes, synthesizing ideas retrieved from different source texts;
- Defining keywords;
- Writing a text that synthesizes ideas from different source texts (or a literature review).

The analysis of the answers provided by the students who attended the course in the last school year (n=45) shows their recognition of the importance of the course contents and their learning achievements. Concerning the relevance, they attribute to the different aspects included in the questionnaire, referring to source texts when writing a text, quoting source texts when writing a text and writing the bibliographic reference of a source text according to the reference style used in the student’s field of study were seen as the most important ones. In what concerns students’ perception of their learning achievements by attending the course, the following aspects are those students highlighted most: quoting source texts when writing a text; writing the bibliographic reference of a source text according to the reference style used in the student’s field of study; elaborating reading notes; elaborating schemes, synthesizing ideas retrieved from different source texts; writing a text that synthesizes the ideas retrieved from different source texts.
2. Discussion and conclusions

Our aim with this text is to present a course on academic literacy, to show the results achieved and discuss its weaknesses and potentialities.

Regarding the weaknesses, its relatively short and concentrated duration contrasts with the nature of the knowledge involved, which needs time and deepening to be correctly learned.

Furthermore, the number of enrolled students, the diversity of their fields of study and the fact that the course appears to be out of line with the scientific area of the courses that students attend require some generalization. This generalization may contradict one of the principles underlying the design of the course, that is, the recognition of the specificity of the texts and literacy practices of each domain of knowledge. Being aware of these problems, we try to overcome them by inviting students to use texts used in the disciplines of their programmes and even use the context of the course to study for other disciplines and produce texts that can be taken into account for their assessment in those disciplines. This approach is naturally demanding for the teacher, who has to consider the specific nature of each student’s work and, therefore, closely monitor a student or a group of students who attend the same programme. In addition, the presence, in the same classroom, of students from different scientific areas emerges as an opportunity for students to perceive the diversity of academic literacy practices and the specificity of the texts they involve.

In addition, we seek to deepen the metacognitive dimension, making students aware of the nature of the practices developed and encouraging a critical attitude toward their work. Using the portfolio as an assessment tool is essential for achieving this objective:

- implying the process rather than the products, it enables access to different stages of the student’s development along the course.
- demanding the selection of relevant material, it favors reflection about the learning achievements and their demonstration.
- involving assessment, it is also a learning tool.

Despite its fragilities and the difficulties, which we try to overcome the way we described above, this course has achieved its goals. It is a crucial moment in the students’ path along their programmes. The quality of the portfolios delivered by many students over the years, their recognition of the importance of the course contents and their consciousness of the learning achievement prove that.

Besides this, this course is an opportunity to carry out a project in the area of academic literacy in a context where, despite the acknowledgment of the importance of its object and the needs of students, it has little tradition. There are few conditions for its affirmation as an issue becoming increasingly important worldwide, as reflected in fruitful research, vast publications and scientific events.

More than claiming a space in the academic context, we intend to discuss the course’s pertinence and relevance, its design, and the achievement of its objectives based on the research contribution and the knowledge built from experience. Instead of responding to the
student's difficulties and needs in the specific uses of language in the academic context, in an immediate and remedial perspective, we think that the investment in academic literacy should be seen as a result of a movement that has been highlighting the role of language in the processes of knowledge construction and the awareness that, in today's world, in constant transformation, rather than transmitting knowledge that sooner or later will become outdated, it is essential to provide students with tools that enable them to face the challenges that society will pose to them throughout their lives.

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