

2 Multimodal texts in support of linguistic and critical thinking development in English for specific purposes

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Abstract

In light of widespread recognition of the need to explore new forms of literacy brought by the contemporary semiotic world, this study explores the potential Critical Thinking (CT) may offer in developing learners' critical literacy in an English for Specific Purposes (ESP) context enhanced with the use of technology. Drawing on research in critical pedagogy that highlights the importance of raising learners' critical awareness through language, I explore how critical practices of identifying and negotiating the expression of personal opinion in multimodal texts, in an English for the Media context particularly sensitive to issues of criticality, can enhance the development of multimodal literacy. This development is informed by Design-Based Research (DBR) (McKenney & Reeves, 2013), in which iteration and refinement of an intervention designed around these practices leads to the development of principles deriving from the evolution of the design.

Keywords: multimodal literacy, critical pedagogy, ESP.

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1. Introduction

The contemporary nature of the communicative semiotic landscape created by new technologies is highlighting the need to revisit our definition of literacy. To be considered literate in this day and age is to be able to effectively communicate multimodally, and this involves “human, cognitive/affective, cultural and bodily engagement with the world and on the forms and shapes of knowledge” (Kress, 2003, p.1). This multimodal shift relates to the understanding that language is no longer an independent code but is part of a set of semiotic resources that effectively ‘synchronize’ to communicate meaning. Part of the shift requires the literacy curriculum to evolve beyond the traditional domains, competencies, and skills. This work describes an instructional design informed by CT and pedagogy practices, aiming to develop students’ ability to critically approach and reproduce information in support of multimodal literacy.

1.1. CT and critical literacy

Despite the widespread recognition of the significance of CT, literature from the field of education indicates that there is uncertainty in conceptualizing it, which may actually be linked to the challenge faced by educators with regards to the ways it should be developed (Ennis, 1985; Facione, 1990). In a discussion of the implications for teaching CT at university for example, Moore (2013) maintains that what is required are acquisition processes that are rooted within specific study contexts and that involve targeted acts of dialog and interaction included in teaching activities. Such efforts, as mentioned by Rezaei, Derakhshan, and Bagherkazemi (2011, p. 772) can be seen in the field of language education where using inferential questions to develop students’ CT in the teaching of reading and writing is not uncommon. Some of these include Elder and Paul’s (2004) effort to emphasize the importance of engaging oneself in constant questioning in the reading process. In a subsequent study Paul (2005) states that “a critical mind improves reading by reflectively thinking about what and how it reads”(p. 32) and finally Cook (1991) regards reading primarily as a thinking process and stresses the significance of engaging students in talking about the text they read. Research on the development of CT therefore indicates that it

can only be cultivated through practices of thinking initiated and scaffolded by educators themselves through an understanding of the principles that govern CT in specific domains and an appropriation of teaching practices.

1.2. Critical needs in the media context

Needs analysis as one of the principles in the design and implementation of ESP courses, was conducted in the context of this study to identify and address the linguistic and CT needs of students in the media (Dudley-Evans & St John, 1998). Exploring CT practices, highlighted the term *critical media literacy*. This refers to the immense influence of Mass media and popular culture in transforming dominant ideologies, and emphasizes the development in learners of a critical eye toward how writers, illustrators, and in general creators of all kinds of texts create these texts and use them in promoting or suppressing particular views and ideas (Kellner & Share, 2007). More specifically, developing critical media literacy requires raising learners' awareness of the different messages transmitted through the media in various forms of representation and interaction. In developing such awareness, the concept of myside bias (Stanovich, West, & Toplak, 2013) as a construct of CT from Cognitive psychology was highlighted for its relevance to thinking and language practices particularly common in the media.

Beyond this, collaboration is considered particularly valuable in the context of ESP for the media, as developing critical media literacy skills involves learners in text negotiation and manipulation often requiring individual and collective analysis, deconstruction, and re-creation of materials from a variety of sources. Harasim, Hiltz, Teles, and Turoff (1995), define online collaborative learning as “a learning process where two or more people work together to create meaning, explore a topic, or improve skills” (p. 30). Recent advances in information and multimedia technologies contributing to the emergence of new literacy practices in online contexts (Hafner & Miller, 2011) further emphasize the need to develop pedagogical strategies for dealing with the abundance of multimodal data which learners in tertiary education are required to process, evaluate, share, and negotiate.

1.3. Multimodality and multimodal literacy

Kress and van Leeuwen (2001) define multimodality as “the use of several semiotic modes in the design of a semiotic product or event” (p. 20). Dillon (2017) further states that it aims to “extend the social interpretation of language and its meanings to the [whole] range of representational and communicational modes for making meaning that are employed in a culture [including images, writing, body language, facial expressions]” (p. 55). Multimodal communication assumes an orchestration or co-deployment of all these meaning making, semiotic resources.

Over the last 85 years, the new literacy movement to refocus literacy as social practice brought profound changes in the use of these resources in education (Jewitt, 2006; Kress & van Leeuwen, 2001; Leander, 2002). The New London Group’s (1996) argument on how literacy pedagogy must account for the diverse, dynamic, and multifaceted nature of communication texts and practices highlighted the need for example, to provide students with opportunities to create their own meanings and develop their personal voice in writing. Contrary to traditional instructional practices for writing (focusing on what is written), the need for student involvement and motivation (how and why something is written) is stressed. Beyond this the The New London Group’s (1996) argument for “situated practice” (p. 85), is in line with critical engagement which, according to proponents of critical pedagogy, “promotes the development of student autonomy and control by [familiarizing] learners with explicit knowledge of language and genres” (Kiss & Mizusawa, 2018, p. 61).

Developing multimodal communication skills involves using language together with other multimodal resources to make meanings in different contexts. As stated by Ho and Lim (2020), this involves the development of fluency in “multimodal literacy [which] is about students learning to view multimodal texts critically and to communicate effectively through multimodal representations (Jewitt & Kress, 2003; Van Leeuwen, 2007)” (p. 254). In order to do this, students need to develop an understanding of how different semiotic resources work together to make meaning. This will then lead to developing students’ ability to use text

and other modalities to produce and represent meanings in different contexts. Multimodal learning supports collaborative authorship as it brings students together in pursuit of communicative objectives in support of contextualized acquisition of targeted language forms. A very important step toward that direction is the recognition of the social context created between those who make and those who engage with text. This consideration has been crucial in this work, which explored multimodality as a tool in critically analyzing this social context through the expression of opinion and bias in support of linguistic and thinking development.

Systemic Functional Linguistics (SFL) offered a sophisticated way of analyzing the relations between language and social contexts (Halliday, 1996).

1.4. Teaching multimodal literacy in the media context

1.4.1. The systemic functional approach

SFL, inspired by the work of Michael Halliday (1978) as one of the approaches to multimodality, provides learners and teachers with ways of exploring linguistic and other choices in relation to meaning through the analysis of multimodal texts. The pedagogical features of the systemic functional approach introduce learners to the social purpose of texts and develop their understanding of language through identification and discussion of specific features in these texts.

Apart from the socializing context, the repertoire representing an individual's access to the linguistic system is shaped by their identity, consciousness, and culture. Using these distinguishing characteristics to question and explore the connection between linguistic choices and the socializing context that guides them is a form of literacy – reflection literacy – that relates to the potential of language to create meaning (Hasan, 1996). O'Hallaron, Palincsar, and Schleppegrell (2015) draw on Hasan's (1996) work focusing on the development in teachers and young children of critical awareness by introducing the notion of 'author attitude' in science texts. In a similar context, Achugar, Schleppegrell, and Oteiza (2007) explore three settings in which a reflective literacy approach

is introduced to public school history teachers in the U.S. Raising teacher's awareness of the linguistic features characterizing historical texts provides them with tools to evaluate the texts learners read and write, and identify the challenges this type of text can pose for learners. The functional linguistics metalanguage they explore also enables teachers to value the discourses learners bring to the classroom and allows them to build on and expand learners' language repertoire. The need to enable this type of reflective literacy for students is recognized in this study, in which media learners draw on their background experience and knowledge to critically reflect and engage with the language used to discuss bias in an effort to raise awareness and further develop linguistic resources that characterize media texts.

1.4.2. Critical pedagogy

In the intervention described here, activities were designed to engage students in collaborative critical analysis of authentic multimodal texts which were based on explicit critical discussion of targeted linguistics and other resources used by authors to express opinion and bias. As a feature of critical pedagogy, critical and dialogic questioning (Benesch, 1999) is a concept inherent to CT. Research conducted in English for academic purposes contexts indicates that a dialogic approach to CT can cater for both the development of students' immediate academic needs and their right to negotiate the status quo by assuming new roles and responsibilities (Benesch, 1999; Morgan, 2009). Beyond this, transformative awareness emerges through activities in which students are encouraged to assume responsibility and construct critical insights in relation to situated requirements and their own needs and rights (Cadman, 2005). This study targets a co-development of both thinking and language through an exploration of the possibilities language and other modalities offer in the expression of biased thinking and, more specifically, myside bias in media texts. This endeavor is informed by critical and literacy practices facilitating a dialogic pedagogy of interrogation, reflection, and empowerment.

Various Information Technology (IT) tools were used to facilitate collaborative meaning making and artifact creation; among these, Moodle eLearning

platform, Google Drive, and Facebook. Artifact creation is integral to the development of multimodal literacy as it enhances learning through making and provides ways for students to represent their learning (Lim, 2018). All of these considerations informed the evolution of a pedagogic design targeted at exploring multimodal literacy practices in support of students' linguistic development.

2. Method

As already mentioned, the research design developed in this study explored CT practices as the context in enhancing university media students' language through engagement with multimodal texts. The design targeted linguistic growth by engaging learners with practices of language identification, analysis, and manipulation, as well as the kind of thinking that can enhance the development of such practices and the language they require. The need to iterate and refine the emerging design has made DBR methodology appropriate for this study.

“DBR is a methodology designed by and for educators that seeks to increase the impact, transfer, and translation of education research into improved practice (Barab & Squire, 2004). In addition, it stresses the need for theory building and the development of design principles that guide, inform, and improve both practice and research in educational contexts” (Anderson & Shattuck, 2012, p.16).

The design reflected the outcome of the needs analysis and was refined through three cycles of enactment, data collection, analysis, and revision.

2.1. Research context and participants

The study was conducted with students in the Faculty of Communication and Media Studies. Students in this department attend three compulsory ESP language courses (English for the Media Studies I, II, III) as part of their four

year undergraduate degree. Participants were 40 Greek-Cypriot and three Erasmus students aged between 19-21 years and who were assessed at an upper-intermediate level of English – Common European Framework of Reference (CEFR) B2-C1. All Greek-Cypriot participants were native speakers of Greek and studied English as a second language for at least six years during their primary and secondary education. They also attended private English language institutes for an average of five years. Erasmus students had a similar English language competence level.

2.2. The design

The pedagogic design, comprising of tasks, materials, and tools was iterated in three cycles of implementation, assessment and redesign (adapted from [Reeves, 2006](#), p. 59). In the cycles, the design becomes reified through dialogic activities resulting in the production of artifacts. In the activities, specific linguistic resources (nominalization, use of voice, reported speech, and modality) are foregrounded and related to thinking and the expression of bias. Each cycle includes a research and a redesign phase. In the research phase, artifacts, participants' views on these, as well as instructor's reflections and observations, are analyzed and re-examined in light of the theory framing the study so as to contribute to the development of students' language and thinking through the generation of new research objectives. In the redesign phase, the revised research objectives inform the new cycle by redefining the tasks, materials, tools, and methodology to be employed. In the center of each cycle, language and thinking practices move the design by slightly shifting the orientation of each cycle (research objectives).

2.3. Data collection and analysis methods

The first phase of data collection explored present (academic) and target situation (professional) needs of students in the specific area of studies. These were identified by the students themselves and academic members of their faculty through questionnaires administered to all participants as well as a semi-structured focus group with the academic staff to discuss the findings

from the questionnaires and explore issues arising in more detail. Following initial needs analysis of the data, I evaluated and redesigned the syllabus of the existing program. The second phase of data collection was concerned with the implementation and evaluation of the design. As the development of the initial design evolved through the implementation cycles, I collected data using different instruments. These included a researcher's journal, field notes in the form of instructional logs, questionnaires, and focus groups with the participants, student reflections, and student artifacts (text data).

Transcribed data from focus groups with students; the researcher's journal, as well as field notes and students' reflections, were read thoroughly, and emerging themes were recorded as nodes and linked to text from the dataset with the use of N-vivo qualitative data analysis software. More precisely, every time a new set of data was analyzed emerging themes were examined and compared to existing ones so as to add new codes and merge recurrent ones with the coding system already created in N-vivo. Throughout this process, insights and ideas emerging from the data were reported as memos within N-vivo to ensure that the theoretical ideas that have emerged in the first round of coding can be systematically evidenced in the data.

For each group of data analyzed, emerging codes were explored in light of the theory framing the study. By moving back and forth between data, further theoretical concepts and patterns emerged, and so I refined preliminary codes by removing overlapping ones. A dynamic audit trail was created through N-vivo's built-in tools for recording and connecting data from various sources so as to meet the criterion of transparency and to enhance confidence in findings (Bringer, Johnston, & Brackenridge, 2004).

Targeted linguistic and other resources, and their role in affecting ways of thinking and talking about bias, were analyzed with the use of SFL as a system of choices (Halliday, 1978) in student final online articles. Based on this theory, I used the system of transitivity to analyze instances of language in terms of participants and processes and to examine their role in creating meaning. I also used the system of modality realized in the mood part of a clause (subject

and finite) and explored by the interpersonal meta function (Bloor & Bloor, 2013; Matthiessen & Halliday, 2014). This allowed me to explore students' understanding of the functions of the metalanguage used as an indication of their linguistic development.

Additionally, I analyzed tasks with regards to students' critical understanding and use of multimodal components, in particular images, in their work to encode personal opinion. I used Kress and van Leeuwen's (1996) ways of constructing and maintaining interaction between the producer and the viewer of an image as described in their work on representation, interaction, and modality. According to this, a number of features in an image can be used to analyse the relational and interactional or interpersonal processes that take place between represented participants (the people, places, things depicted in images) and interactive participants (the people who communicate through the images, the producer, and the viewer). To evaluate students' understanding of these features as explained and discussed in class, I used the following criteria to assess the images students used to complement their texts.

- Image act: the gaze and/or gestures of represented participants

This relates to represented participants' direct or indirect look or gesture at the viewer. Such features in an image firstly create a visual form of direct and formal address and secondly, they indicate a requirement for the viewer to enter into some kind of imaginary relation with him or her. Exactly what kind of relation is then signified by other means, such as the facial expression or the gesture used.

- Social distance: size of frame and angle

The choice between close up, medium, and long shot (size of frame) allows for different degrees of viewer involvement with the represented participants. They can allow us as viewers to come close or distance ourselves from represented participants. At close distance the object is shown as if the viewer is engaged with it, whereas at long distance there is a barrier between the viewer and the object.

- Modality

Visuals can represent people, places, and things as though they are real, as though they actually exist in a specific way or not. The more that is taken away (from an image), abstracted from the colors of the representation, the more color is reduced and the lower the modality.

3. Results and discussion

Analysis of data from the researcher's journal, field notes, students' reflections, and focus groups indicated participants' appreciation of the affordances of the design in developing learners' ability to use text and other multimodal components based on their functional use to express opinion. Specifically, based on the final round of qualitative coding analysis in N-vivo, the following three categories detailed by a number of recurrent (sub-)themes indicate trends in the data and sometimes overlap between the categories emerged.

Critical mindset in support of language and thinking development was the first recurrent category, and it related to the CT and literacy practices incorporated into the design of activities, which were informed by the construct of myside bias (Toplak & Stanovich, 2003). This, as already mentioned, has been a fundamental concept framing this study both theoretically and empirically. Based on findings indicating that the avoidance of myside bias is a result of practice and that it is positively correlated to a facilitating environment (Stanovich & West, 2008), the designed activities targeted language development through linguistic practices of identifying, discussing, and controlling such modes of thinking. In the activities, iteration of a standardized critical questioning procedure, enhanced by scaffolds targeting specific content and linguistic elements in texts, enabled the gradual development of a critical mindset in learners. Through their repeated employment, these resources (CT and linguistic), initially employed as a point of reference in the activities, gradually developed beyond a set of instructions into practices of thinking.

The potential of *Language as a tool in the development of both thinking and linguistic competence* emerged as the second main recurrent category in the data. This was associated to an understanding of the functional role of language and other resources in expressing attitude as part of a wider development in language as perceived by the learners.

Finally, the use of *Dialog in support of language and thinking development* was supported by recurrent themes in the data deriving from theories on critical pedagogy, as well as shifts in both students' and the teacher's thinking with regards to refined classroom practices, engagement, and competence. As mentioned earlier, critical pedagogy was used in the study to facilitate learners' engagement with text in the context created by CT practices and more specifically the avoidance of myside bias. Through this engagement, discussions on texts were used to raise learner's critical awareness of the relationship between linguistic and other resources and meaning (Durant & Lambrou, 2009).

Other important benefits to linguistic improvement from practices of dialogic engagement, recorded as recurrent themes in the data, related to new measurements of achievement, instant constructive feedback, and collaboration within the dialogic community. More specifically, a number of learners highlighted that by taking part in the discussions they were able to observe and adapt good practices exhibited by more competent students. They were also supported through feedback from the instructor and their peers, and this enhanced both their level of engagement and performance.

Multimodality, supported by the use of technology which was key in the design of activities, was also acknowledged by participants for its contribution in complementing text to improve writing.

“I think the use of image was also really useful...there is so much information in an image or video and this lesson showed us how images can be used in combination with writing to make a piece more powerful...”.

Authenticity enhanced by the use of multimodal material was also acknowledged by some learners.

“In our discussion of different issues, it was very interesting that we watched real life videos of people talking about these issues, speaking in a certain way, emphasizing certain words using specific language to support their views...which we later identified with our critical analysis”.

In the quote above, the student identifies and comments on his engagement with ‘real life’ material through which he is enabled to observe peoples’ speech and use of specific words to support ideas. It is interesting to note the student’s recognition of how this experience supported their work in critical analysis.

Another finding on multimodality related to students’ appreciation of the use of multimodal texts as an additional way of understanding and representing meaning.

“I am a visual learner so I think I have benefitted from learning to critically analyze and use images... I can communicate meaning better now!”

What is interesting in the reflection above is the student’s acknowledgment of how multimodal literacy builds on characteristics of their learning style by providing a preferred mode of representation, allowing for more powerful learning.

4. Conclusion

As indicated in the characteristics of DBR, research should target the evolution of principles. Systematic and ongoing analysis of data, collected through iteration of the designed intervention in this study, led to the generation of design principles relating to theory, pedagogy, and methodology which may be operationalized in other contexts.

Specifically, analysis of the data highlighted that identifying learners' CT and literacy skills can be useful in creating the social context around which language engagement can be made meaningful in support of language development. Furthermore, drawing on specific concepts from SFL to foreground the relationship between language and thinking, in this study in expressing personal opinion, can support teachers and learners in understanding how language works, and can support both linguistic teaching and learning. Moreover, data analysis has shown that understanding the functional role of language and other modalities in construing meaning (e.g. avoiding bias) is an important parameter in sustaining rationality and critical thought, and that iteration of critical questioning processes can develop habits of mind which seem to support both learners' thinking and language. Specifically, developing students' understanding of how different semiotic resources work together to express opinion/bias can help in advancing their ability to use text and other modalities in producing and representing meaning in different contexts.

Finally, analysis of data indicated that critical engagement with language through multimodal texts can enhance collaboration among learners in support of meaningful interaction and linguistic growth.

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