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Learning on-Line about Modality Inwritten and Oral English for Science and Technology

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Abstract

Modality has recently become a subject of interest within the domain of English for specific purposes. Although the syntax of English modal verbs is relatively simple, the use of heterosemic modal auxiliaries (will, must, may, etc) is a complex and often difficult-to-learn notion that requires specific and long-term attention to master. This study examines the portrayal of modality in the on-line platforms created to accompany respectively the textbooks English for Careers: Technology, vol 2 (EFCT) and Minimum Competence in Scientific English and English (MCSE).Sections from both on-line platforms were examined for types of activities and frequency of modal auxiliaries. The technical aspects of both platforms were compared, the frequency of modal verb tokens counted and compared with those found in other corpora. Finally, the contrasting approaches towards teaching modality are discussed. Both websites rely heavily upon users inserting a missing word via diverse techniques and integrate oral documents, but do not contain images to aid learning. Despite the initial similarities between the two platforms, several major differences were found including use of oral documents, navigational tags, feedback, attention to grammar, and the approaches to teaching modality. EFCT modality tasks may be helpful for students who need to practice differentiating between specific expressions, such as must and have to. MCSE appears to be more useful for acquiring a global vision of modality that includes modal auxiliaries as well as adjectives and adverbs. Given other corpora, certain students may need more practice with the modal verbs could and may. Furthermore, the websites are aptly titled supplementary materials, as neither offers declarative knowledge about the system of modality or its rhetorical uses.

1. Teaching modality on-line

Modality has recently become a subject of interest within the domain of English for specific purposes [1]. Although the syntax of English modals is relatively simple, the use of heterosemic modal auxiliaries (will, must, may, etc) is a complex and often difficult-to-learn notion. This case study examines the portrayal of modality in the on-line platforms created to accompany respectively the textbooks English for Careers: Technology, vol 2 (EFCT) [2] and Minimum Competence in Scientific English and English pap-ebook (MCSE) [3]. This study concentrates only on modality, which is necessary for communication in a wide range of academic or professional settings.

1.2 Supplementary materials

For over a century, technology has been used to acquire both oral and written language skills [4] [5]. Today, the vast majority of commercial language-learning software are in a tutor question format, often multiple choice, and concern vocabulary or comprehension [6] [7]. Drills have evolved, but learning continues to remain conditioned by a range of factors, including motivation, learning style and skills, declarative knowledge, practice, time, and feedback [8] [9] [10] [11] [12].

1.3 Modality

The system of modality permits a speaker to express attitudes and opinions. Modal verbs, adjectives, and adverbs can be woven within a speech event, parallel to tense or voice [13] [14]. Semantic notions inherent to modality include possibility, necessity, ability, obligation, permission, and hypotheticality, along with rhetorical functions. Modal verbs share common characteristics: they do not co-occur, take no –s forms, and include no non-finite forms, no imperatives, but can be used as "code verbs". The myriad of often conflicting scholarly descriptions of modal verbs, adjectives, and adverbs demonstrates their complexity. Scholars within the field of modality have continued to debate questions of evidentiality, objectivity/subjectivity, performativity/descriptivity, and tense [15] [16] [17] [18] [19] [20] [21].

2. Methodology

Sections from both platforms were examined for types of activities and frequency of modal auxiliaries. The fifteen on-line units were evaluated and the five chapters most concerned with modality were included in this study. Unit 9 on "modality" of the 12-chaptered MCSE was selected for this study.

The technical aspects of both platforms were compared, the frequency of modal verb counted and compared with those found in other corpora. Finally, their contrasting approaches towards teaching modality are discussed.

3. Results

Both websites, which are open to the public, include both oral and interactive written activities, as well as unauthentic recorded texts with the possibility to pause or repeat at any time. The interactive activities offer automatic feedback to student responses. In case of an incorrect response, EFCT feedback suggests users attempt to choose the correct answer among the list. Many MCSE exercises require users to write each answer and the automatic feedback supplies the correct answer.

3.2 Technical aspects

Despite the initial similarities between the two platforms, several major differences were found (cf. Table 1). Although both platforms offered immediate feedback, MCSE feedback was in both written and oral form for the exit test and vocabulary section.

Table 1: Comparison of websites

	EFCT Units 4, 6, 7, 10, 12	**MCSE Unit 9**
Sound	Document only	Document and task feedback
Textbook cover (hyperlink)	Yes	Yes
Images	4 decorative photos	0
Navigation	List of task, unit headings links on main screen are replaced by task.	List of units at right and task tags at top of screen. New screen for tasks.

Entry test	0	Under construction
Exit tests	0	10 write-in fill-in-the-gap sentences
Vocabulary section	7 Drop-and-drag fill-in-the-gap sentences	255 write-in fill-in-the-gap sentences
Grammar	8 multiple-choice questions	0
Grammar explanations	No	No
Listening	Unauthentic documents, native and NN speakers.	Unauthentic documents, native speakers.
Listening tasks per unit	One document, 4 multiple-choice questions.	Two documents, transcript in textbook.

The navigation of the MCSE platform was easier than for EFCT as the former incorporates both top-of-the-screen navigation tags and the opening of new screens. For EFCT, as the unit headings are replaced by the chosen task, the user is obliged to return to the main index before choosing a new task. This was especially noticeable for the EFCT vocabulary tasks which included only one screen of eight questions, while the MCSE site offered 26 sequential screens of 10 questions. The series begins randomly, so the user will begin with new words when returning to the unit. MCSE incorporates a dictionary of key words. Neither website incorporates grammar and language use instruction or pedagogical images.

3.3 Contrasting approaches

An examination of the grammar and listening tasks also revealed significant differences. Each EFCT unit offers a grammar section. The notions treated in the grammar section are not developed in the corresponding tasks; although examples may recur in other chapters (cf. Table 2). EFCT oral documents center on dialogues between a range of native and non native speakers discussing academic and technical themes. Four multiple-choice questions serve to test comprehension, but no transcript is available.

Table 2: Modal verbs of chapters 4, 6, 7, 10, and 12, English for Careers: Technology on-line

will	*would*	*can*	*could*	*may*	*should*	*must*	*might*	
5	7	5	3	0	0	4	0	Grammar
0	0	0	0	2	0	0	0	Vocabulary
4	1	5	3	0	2	0	0	Listening
9 22.5%	8 20%	10 25%	5 12.5%	2 5%	2 5%	4 10%	0	Total (40) 100%

On-line MCSE does not include a specific grammar section, although modality is integrated within other parts of the platform, as the frequency of modal tokens reveals (cf. Table 2). The vocabulary

exercises do not include questions related to modal verbs; instead adjectives and adverbs related to modality and other general scientific terminology are targeted. The listening task includes two oral documents that are read-aloud versions of texts from the textbook. Hence, a user without the textbook has no possibility of checking the accuracy of comprehension.

Table 3: Modal verbs of Unit 9, MCSE on-line tasks

will	*would*	*can*	*could*	*may*	*should*	*must*	*might*	
4	1	1	3	4	3	3	3	Entry/exit test
18	3	15	2	1	5	6	0	Vocabulary
4	3	3	2	3	2	3	2	Listening
26 27.7%	7 7.4%	19 20.2%	7 7.4%	8 8.5%	10 10.6%	12 12.8%	5 5.3%	Total (94) 99.9%

3.4 Frequency of modal verbs from the platforms compared to authentic corpora

Table 4 compares the modal verbs found on the two websites and other corpora. Collins [18] worked with general English oral and written corpora, while Scientext [28] is restricted to scientific research article abstracts.

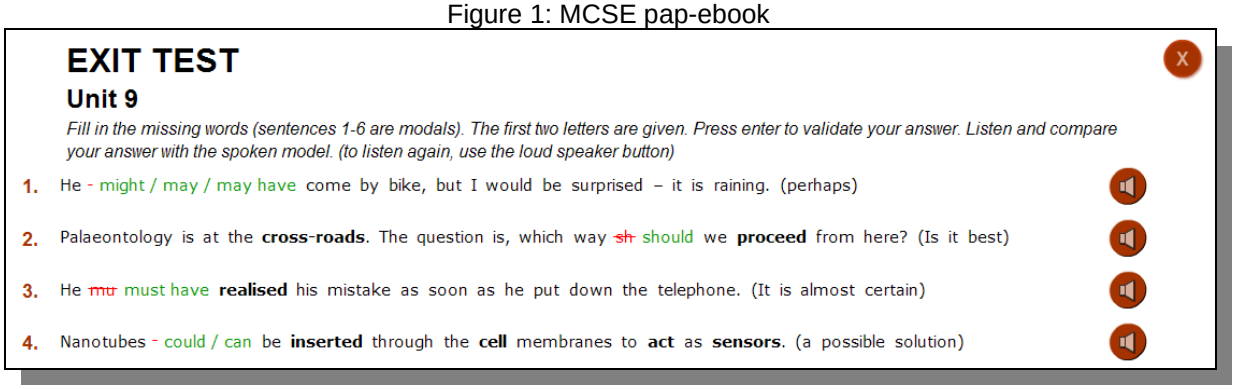
It can be noted that the frequency of will and can in the on-line supplementary materials of the two textbooks mirror general English rather than that of scientific abstracts. Both websites inflate the use of must compared to general or written scientific use. This may be for pedagogical reasons, as for example, the Language Spot of EFCT's Unit 7 is dedicated to differentiating between must and have to. Would, often found in oral interaction, as in I'd like…, is not found as often in scientific abstracts as are could and may. These two later modal verbs may need greater attention for professionals in the fields of science and technology.

Table 4. Frequency of modals in corpora and the two websites studied

will	*would*	*can*	*could*	*may*	*should*	*must*	*might*	*shall*	
8,505 24%	7,775 22%	7,663 21.6%	3,557 10%	2,261 6.4%	2,432 6.9%	1,367 3.9%	1,499 4.2%	343 1%	Collin's Corpus [15]
164 9.9%	40 2.4%	729 44%	242 **14.6%**	209 **12.6%**	146 8.8%	74 4.5%	51 3.1%	0	Scientext [22]
9 22.5%	8 20%	10 25%	5 12.5%	2 5%	2 5%	4 **10%**	0	0	English for Careers, On-line Units 4, 6, 7, 10, and 12.
26 27.7%	7 7.4%	19 20.2%	7 7.4%	8 8.5%	10 10.6%	12 **12.8%**	5 5.3%	0	MCSE, On-line Unit 9

MCSE also gives multiple examples of adjectives and adverbs of modality, connected to modal verbs or in isolation, as in the examples of Figure 1. The task highlights, for example, the similarity between might, may, and perhaps.

Figure 1: MCSE pap-ebook



4. Conclusion

Both websites rely heavily upon users inserting a missing word via diverse techniques. Each site is very simple to use, although EFCT takes a bit longer to navigate from page to page. The rarity of adjectives and adverbs related to modality in the EFCT website simplify the input, compared to that of MCSE. The written and oral feedback of the MCSE site may be more adapted to students having a gift for oral skills. The considerable extra amount of materials found on MCSE may also be a plus for those desiring to practice for longer periods or over several sessions.

EFCT modality tasks may be helpful for students who need to practice differentiating between specific expressions, such as must and have to. MCSE appears to be more useful for acquiring a global vision of modality that includes modal auxiliaries as well as adjectives and adverbs. Given other corpora, certain students may need more practice with the modals could and may. Furthermore, the websites are aptly titled supplementary materials, as neither offers declarative knowledge about the system of modality or its rhetorical uses.

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