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Designing technology-enhanced language learning activities for semantic nuances

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Introduction

Language teaching/learning has undergone significant transformations along with the evolving technological landscape (cf. Nygren et al., 2019) providing new opportunities and contexts for learning through online resources, interactive platforms, and empowering students to be responsible for their learning (Thuy Nguyen & Habók, 2022).

The research's aim is to design technologically enhanced language learning activities that seamlessly link formal learning with non-formal learning. In particular, this study explores the possibilities of virtual spaces for learning semantic prosody of English phrasal verbs, whose meanings often cannot be deduced by adding the component words' individual meanings (Sinclair, 2004: 25-26). Unaware of this, learners faced with such verbs may erroneously understand and use them in an inappropriate context (Omidian & Siyanova-Chanturia, 2020: 517).

Thus, the two research questions are: (1) How can formal and non-formal learning contexts be seamlessly combined for the learning of semantic prosody? (2) How can such learning be made possible or enhanced by technology?

1. Literature review

Defining blended learning in broad sense, Pérez-Sanagustìn et al. (2014: 120) distinguish formal learning where "the learning objectives are defined by someone else besides the learner and the means to achieve them is determined by someone other than the learner" from non-formal learning where "the learner controls what he wants to learn but does not control the means to achieve this learning". Technology-enhanced language learning includes "any language learning activity that uses technological means and/or tools for efficiency, motivation, and learning style flexibility" (Zhou & Wei, 2018: 472)

and can bridge formal and non-formal settings to enrich language learning activities. At the same time, the development of language materials is a growing area of research (Mansor et al., 2021).

Among various student-centered methods in language teaching, data-driven learning (DDL) is an approach in which the learner is able to "find answers to their questions by using software to access large collections of authentic texts relevant to their needs, as opposed to asking teachers or consulting ready-made reference materials" (Boulton, 2017: 181). Learners try to discover linguistic patterns and rules by themselves as "a researcher" (Johns, 1991: 2) by analyzing samples of language taken from a linguistic corpus, which refers to a collection of authentic language, whether spoken or written. DDL can be implemented via printed materials, though research generally suggests that DDL approaches are "most effective when using a concordancer hands-on" (Boulton & Cobb, 2017: 385).

Concordancers and online tools can be especially useful for working in specific areas, such as the semantic/pragmatic nuances of English multiword expressions. Phrasal verbs, composed of a verb and a particle, may have an unpredictable meaning to which the component words contribute little or nothing. For such a phenomenon, Sinclair (2004: 29-30) proposes the concept of *idiom principle* on which a single word is never freely chosen, i.e. without considering other words to be used together, and it never solely determines the meaning of the final word combination. Thus, phrasal verbs have a *phraseological tendency* where the component words often create meaning in combination.

Other than their polysemy and semantic unpredictability, there is another aspect of phrasal verbs that poses challenges for learners – *semantic prosody* (Sinclair, 2004; Louw, 1993), also known as *evaluative prosody* (Partington, 2015), *emotive prosody* (Bublitz, 2003), and *discourse prosody* (Stubbs, 2001). Semantic prosody refers to "latent categories of meaning" that can be categorized as, for example, "something nasty" or "something magnificent" (Sinclair, 2004: 173). Although frequent in language and essential for precise use of words, these attitudinal meanings are often neglected and not recognized in published grammars (Sinclair 2004: 173). Even "quite advanced proficiency learners" might not be cognizant of a word's semantic prosody, although they could still use it appropriately (McGee, 2012: 184). In fact, for learners to be aware of the semantic prosody of a word, they must receive as input an abundance of varied examples, something they just might never receive (Omidian & Siyanova-Chanturia, 2020: 514). This is perhaps where technology and techniques of corpus linguistics play a role in the pedagogy of semantic prosody.

2. **Corpus analysis and results on "bring up"**

The phrasal verb *bring up* can exemplify how activities can be designed using technology for learning semantic prosody. The verb *bring* itself is included in the Oxford 3000, a list of the 3000 most important words to learn in English. And, according to the British National Corpus 2014 (BNC2014), *up* is the third most frequent participle to be combined with *bring* after *in* and *to*.

A dataset extracted from BNC2014 via LancsBox X was used for an initial corpus analysis on *bring up*. As *bring up* can receive an object in different positions, four constructs were extracted: *bring up children*, *bring them up*, *bring the children up*, and *bring my own children up*, that is up to three words between *bring* and *up*. For a total of 776 occurrences, there are 145 occurrences in the spoken variety and 631 in the written variety. In terms of the construct, the most frequent is *bring up x* occurring 476 times, followed by *bring x up* (194 occurrences), *bring x x up* (82), and *bring x x x up* (24).

The corpus analysis on *bring up* reveals that the expression can be used for a total of seven meanings: *to look after a child until it becomes adult* (367 occurrences, 47%), *to mention something* (162, 21%), *to physically carry something* (145, 19%), *to cause something to appear on a digital device* (39, 5%), *to improve something to a certain level* (35, 4%), *to figuratively carry something* (22, 3%), and *to vomit something* (22, 3%).

Due to the limited time most teachers/learners face in a lesson, only the three most frequent meanings will be covered in the experiment and only the second meaning *to mention* is considered for its semantic prosody because there is no distinguishable semantic prosody for the two other meanings. Most of the time, when *bring up* is used as *to mention*, either the thing that one brings up is negative or the context in which one brings up something is negative. Of 162 occurrences, 141 (87%) are negative, 18 (11%) neutral, and only 3 (2%) positive. It is worth noting that the 3 cases of positive prosody happen in an informal conversation (2 occurrences) or online (1 occurrence). One can argue that in such settings, semantic/pragmatic inaccuracy in language use is more tolerable. Otherwise, *bring up* can be used in a neutral context to a certain extent (11%).

In fact, it is sometimes difficult to determine if a context or a subject brought up is really negative. The more appropriate way to explain the semantic prosody of *bring up* as *to mention* is that the subject brought up might not be negative in itself but is certainly undesirable for the interlocutor, which can be either perceived by the speaker or the interlocutor. Consider the two following examples: *Whatever, it would be insensitive to bring it up while she needed to focus on dealing with this* and *I'd rather you didn't bring my Henry up, I'm very sensitive about him*. In the first example, the subject that it would be insensitive to bring up is perceived by the speaker as undesirable; while in the second example, the speaker hopes that no one mentions her Henry, a topic she as an interlocutor deems undesirable.

Bring up as *to mention* has an idiomatic quality, often used with inanimate pronouns like *it* and *that*, as much as 65 times out of the total of 164 occurrences. Regardless of the form of "bring", the phrasal verb is used with *it* 50 times, and 15 times with *that*.

One of the more frequent collocates with *bring up* is *again* which appears 16 times. While the occurrence seems relatively low (slightly less than 10%), the 16 occurrences happen in the same context where an undesirable topic has been brought up before and is once again brought up against the wish of either the speaker or the interlocutor, e.g. *... promises never to bring something like that up again.*

Closer to the phrasal verb, the collocates include a set of synonyms seeming to be interchangeable in these contexts: *subject* (9 times), *issue* (8 times), *topic* (3 times), *point* (3 times), *problem*, *questions*, *arguments*, and *matter* (once each). Altogether, they appear 26 times out of 164, or 16%. These collocates are also indicative of the semantic preference of "bring up" as "to mention something for consideration/discussion". These collocates imply that whatever is brought up would be something for consideration, discussion, debate, etc. If one explores these collocates further, one finds some colligational tendencies: often "bring up + article + subject/issue/point/problem/matter + preposition + something negative". For instance, *brought up the subject of Brexit, bringing up the issue of bias*.

More often than not, what is usually "brought up" as something undesirable can cover a wide range of things: competition, drug allegations, formative years, corporates' approach to tax, lap-dancing and many more. While some can appear outright negative in themselves, some can be more neutral until one explores the context which makes the negative aspect clear.

As information on semantic prosody is not provided in dictionaries, learners might not be cognizant of them. DDL as a learning approach raises their awareness and allows them to induce usages from an abundance of examples.

3. **Methodology**

The aim of this exploratory study was to investigate the usefulness of technology enhanced DDL activities for learning semantic prosody in a formal and non-formal setting. A total of thirteen French undergraduate students participated in this study. They were aged between twenty and twenty-two, enrolled in different majors at the Université de Lorraine. They self-evaluated their proficiency to be at the B1 level (CEFRL, 2020) and are expected to achieve B2 before graduating. The participants registered for a one-session workshop of one hour that took place once per week at Centre de Langues Yves Châlon and were required to bring their own laptop. The sample size was quite small due to the

setting of the experiment, which was conceived as a pilot test. An introduction to the research, its purpose and procedures was announced in each workshop and the participants gave their informed consent.

During the formal session, the participants introduced themselves and learned how to use the online tools provided, namely Milanote[1], SKELL[2] and YouGlish[3]. Milanote is a multi-device brainstorming app with an easy-to-use drag-and-drop interface. It has collaboration features that allow users to interact, comment and edit the board together in real time. This aspect makes it an ideal virtual space for interactive language learning. SKELL, Sketch Engine for Language Learning, is a free web-based corpus tool comprising authentic texts crawled from the World Wide Web. It was used in the study to provide learners with concordance lines and was selected because it presents numerous user-friendly features. Lastly, YouGlish is a free-to-use online tool designed to help its users improve their pronunciation by extracting sections spoken in a native tongue from YouTube videos.

The participants were guided through three main activities: activity one involved brainstorming the meaning of *bring up*. Activity two involved searching the key words in context (KWIC) on SKELL, discussing possible meanings with a partner and grouping sentences based on their different meanings; the researchers monitored and provided guidance. Finally, in activity three they observed a preselected list of sentences extracted from SKELL and BNC2014 to determine the target item's semantic prosody. The last activity aimed to help with the participants' observation and reasoning. Then they reflected on how certain words should be used and on how to identify the semantic prosody.

The non-formal activities followed the process of tasks performed in the classroom, including the use of the corpus tools, but exploited online applications such as Wordwall[4], a web-site for creating interactive games such as quizzes, matching activities and word games, to elicit the participants' reflection. They were invited to investigate the semantic prosody of several language items, namely *end up*, *unbelievable* / *incredible* and *happen*. In addition, they were encouraged to keep a corpus-based journal to keep track of their autonomous findings on Milanote. Finally, participants could exchange ideas and questions on a forum with each other and the researchers.

To explore the participants' impressions and benefits, they were invited to keep a logbook integrated into the online platform of the University of Lorraine, EDOlang, and complete an online questionnaire in French including 17 five-point Likert-scale items and non-mandatory open-ended questions.

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[1] https://milanote.com/
[2] https://skell.sketchengine.eu/#home?lang=en
[3] https://youglish.com/
[4] https://wordwall.net/

4. **Results and discussion**

In this pilot test, five out of thirteen participants returned the questionnaire. Almost all participants are positive towards the technologies introduced. Three prefer learning English via DDL over a traditional method and agree that technological tools play an important role in their learning process. All of them agree that the use of Milanote, SKELL, and YouGlish helped improve their knowledge and competence in English while Milanote provides a stimulating learning environment for three. However, none thinks that collaboration with others on Milanote slows down their own learning process. In fact, only one participant confirmed that he or she has not tried using the tools proposed outside the workshop.

As for their opinion of the DDL activities, all participants agree that technologically enhanced activities are helpful for learning English and that the amount of data presented is not overwhelming. In fact, the abundance of examples helps all participants to learn how to use an expression and to avoid making mistakes in the future; they have come to understand *bring up* and to be aware of its polysemy and different semantic prosodies. Furthermore, they also find the items learned to be useful.

The analysis of the thirteen participants' logbooks confirmed the results obtained by the questionnaire. Most learners had positive attitudes towards both the activities and the tool proposed and appreciated the "innovative way to learn English" and "interesting tools" and expressed their willingness to continue using the method and tools proposed. They were surprised to be able to "think in language" and to learn how to be "more natural" and "work in depth" by observing authentic language. Numerous participants mentioned the unexpected discovery of different meanings and negative prosody and the importance of context.

The participants in this study were students from different majors who enrolled in the workshop, required to attend the formal session to obtain credits for their university courses. As it was only one session, they did not express an interest in working in an interactive and collaborative manner outside the workshop. Thus, despite the positive opinions expressed in the logbook and in the questionnaire, they did not interact either on the forum or on the corpus-based journal. Non-formal activities are by their nature not mandatory but the discrepancy between the results obtained, and the actual execution of certain activities leaves ample room for improvement to the design of this pilot test.

5. **Conclusion**

This pilot study showed how formal and non-formal learning contexts can be combined for learning/teaching semantic prosody via an interactive platform like Milanote paired with online corpus SKELL and YouGlish. Not only do these tools seamlessly connect the two learning contexts, but they also equip learners with what a traditional language classroom cannot provide to learn topics like semantic prosody, which can only be learned through an abundance of examples. In such a case, it can be established that the inclusion of technological tools has enhanced the participants' learning experience and outcomes.

The pilot test was conducted to test the experiment instruments we designed, and the resulting insights fed into a full-scale experiment where certain procedures used in the pilot test have been improved. The full-scale experiment is currently ongoing with a total of 83 participants from four existing classes of a compulsory English course for Social Sciences students at the University of Lorraine. The experiment includes three 45-minute sessions (once per week) for the four respective classes. After the experiment, questionnaires will be given out to collect the participants' opinions. The entire experiment will finish in mid-March 2023.

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