High school students' use of digital tools for learning English vocabulary in an EFL context

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Abstract. This study investigated Romanian high school students' use of digital tools for learning vocabulary in English. Although students have a wide range of technological affordances at their disposal, little is known about how they make use of them or the extent to which they are aware of how to use them in their vocabulary learning. The study features a sequential mixed-methods research design combining results from focus group interviews and a self-reported questionnaire which was answered by 1,239 students enrolled in nine high schools across Romania.

Keywords: MALL, CALL, vocabular learning, digital context.

1.   Introduction

The current paper reports the results of a large scale study focusing on the way Romanian high school students make use of digital tools in their learning of English as a Foreign Language (EFL) vocabulary. The impact of various technological affordances in the 21st century may have had an impact on the choice and use of vocabulary learning strategies. However, in this cultural context, little is known about learners' motivation and engagement with using technology in language learning, the focus being mostly on teachers' use of technology in teaching.

2.   Method

The study used methodological triangulation, a research strategy that can be represented as qual→quan (Dörnyei, 2007). The two methods I combined in

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my project are: focus group interviews and the self-reported questionnaire. The questionnaire items were designed on the basis of the results from focus group interviews and on my own apprehension of digital tools, and they showed acceptable reliability. The first phase of data collection consisted in conducting five focus groups in the participant schools. The second phase of data collection involved the parallel administration of the questionnaire, in nine schools, and took place in 2014.

3.   Results

Based on the features that characterize technology enhanced tools, the questionnaire items related to students' use of digital tools were grouped into determination, social, metacognitive-cognitive and memory strategies, similar to Schmitt's (1997) grouping of vocabulary learning strategies. The determination digital strategies represent strategies which help one find the meaning of a new word using a digital device.

The social digital strategies are mainly characterized by learning while interacting with others in an online environment. They are associated with social networking and gaming, as, according to the students in the focus groups, it is during these activities that they encounter and learn most of the new words.

The metacognitive-cognitive category includes strategies which focus on the learning or consolidation of new vocabulary using a device, a Computer-Assisted Language Learning (CALL) or Mobile Assisted Language Learning (MALL) app to learn or consolidate new words. I combined the metacognitive-cognitive strategies in one category as strategies may fall into one category or another depending on how the student uses the strategy. For example, using a vocabulary learning app could be either a cognitive or a metacognitive strategy. If the learner uses it only to learn vocabulary, then it is a cognitive strategy, but if the learner uses it independently only to improve the knowledge he/she has of some words, then it is a metacognitive strategy.

The memory digital strategies represent strategies that entail using a device, a program or an app to enable the memorization of new words.

The categorization of digital strategies is determined by how the learners use the device or the app/program, by their learning behavior, which can be directed either towards learning or entertainment. These two purposes often overlap in an online environment as the student can simply start using an app for vocabulary learning as

a form of entertainment which also has learning outcomes. Accordingly, there is a limitation behind this categorization as the same strategy may be included in more than one category, depending on how it is used or on the user's learning behavior.

The data indicated that Romanian high school students mostly use determination digital strategies, followed by social digital strategies, memory digital strategies and metacognitive-cognitive digital strategies. Table 1 below shows the types of digital strategies used by Romanian high school students.

Table 1. Types of digital vocabulary learning strategies used by Romanian students

Types of digital tools	M	SD	Min	Max
Social	2.63	0.76	1	5
Determination	2.83	0.62	1	5
Metacognitive-Cognitive	2.05	0.72	1	5
Memory	2.05	0.67	1	5
Total	2.39	1.24	1	5

Table 2 below shows students' preference of individual digital tools. The following reporting scale (Oxford, 1990) was used: 'High Usage' (3.5-5.0), 'Medium Usage' (2.5-3.49), 'Low Usage' (1.0-2.49).

Table 2. Preference of individual digital tools for vocabulary learning

Type of strategy	Item	M	SD
High usage (M=3.5 or above)			
Det	I search new words in an online dictionary on my computer/tablet.	3.56	1.15
Det	I look up for an image on the Internet which could represent the meaning of a word.	3.52	1.09
Medium Usage (M = 2.5–3.49)			
Det	I use a translation app.	3.48	1.21
Det	I learn and figure out the meaning of some words from online games.	3.39	1.16

Det	I search new words in an online dictionary on my phone.	3.31	1.28
Soc	I learn new words in English when using social networking.	3.28	1.26
Det	I learn new words while browsing different webpages on the Internet.	3.27	1.32
Soc	I chat in English when I am online.	3.15	1.29
Mem	I remember words encountered online if I access those pages again.	2.98	1.20
Met-Cog	I watch and listen to tutorials, presentations, talks/podcasts/radio on subjects that I am interested in when I am online.	2.90	1.38
Soc	I ask a friend/classmate who is online about the meaning of a word.	2.62	1.19
Mem	I look up the pronunciation of a word in an online dictionary and I listen to it.	2.57	1.23
Det	I access the link to a new word in an online text which sends me to a definition of the word in the dictionary.	2.55	1.14
Low Usage (M = 2.49 or below)			
Soc	I use new vocabulary through tasks I do on my device (e.g. take photos, record myself, make short videos and present them, role play, group conversations in English on WhatsApp, etc.).	2.47	1.26
Met-Cog	I learn vocabulary through computer assisted tasks at school.	2.47	1.22
Det	I learn new words from apps I'm using.	2.25	1.21
Met-Cog	I play vocabulary games on my smartphone/iPad/computer.	2.25	1.21
Det	I use Thesaurus in Microsoft Word when I need synonyms or antonyms.	2.10	1.13
Det	I download vocabulary learning apps on my smartphone/tablet/iPad.	1.89	1.04
Met-Cog	I test myself on new words by doing online vocabulary quizzes.	1.88	1.06

Met-Cog	I use the spell check in Microsoft Word.	1.87	1.17
Det	I access corpus websites.	1.85	1.04
Soc	I ask questions on various websites/discussion forums related to the meaning of some words/expressions.	1.79	1.00
Met-Cog	I do vocabulary exercises on various webpages on the Internet.	1.77	0.99
Mem	I save new words in a list on my phone.	1.71	1.00
Met-Cog	I use computer assisted vocabulary programs to learn new words.	1.64	0.96
Mem	I put words I want to remember on my computer screen to remind me.	1.50	0.91
Mem	I record myself on my phone/tablet saying the new word.	1.48	0.92

N=1137

4.   Discussion

Despite the fact that there is a plethora of available computer assisted vocabulary programs and mobile assisted vocabulary learning apps, the data revealed that Romanian high school students have a low usage of computer assisted vocabulary programs and of mobile assisted vocabulary learning apps. Online dictionaries, translation apps, online games, social networking and various online extensive reading and listening activities are the most frequently used resources. According to the data, the respondents learn or practise new words during various online activities, suggesting that students prefer learning while doing something they like.

The students in the focus groups explained their lack of interest in vocabulary learning apps or dedicated Computer Assisted Vocabulary Learning (CAVL) programs by stating a preference for subconscious learning of words while using a digital tool. Also, the data in the focus groups revealed that students' attitudes are partially determined by the fact that students are not aware of any apps or programs which could really have an impact on their language learning and that they do not know how to make a good selection among the numerous available apps.

These outcomes suggest that although students in this context have access to these tools and use them on a regular basis, no CALL or MALL learning culture has been set up in this particular cultural context.

5.   Conclusions

There are several features that define learners' digital engagement, respectively: lack of technology-related academic skills, a certain reluctance for using personal handheld devices for educational purposes, the perception of handheld devices and computers as content delivery tools rather than potential metacognitive tools, reluctance to mix formal and informal learning outside the classroom, unawareness as to the existence and use of various digital tools for vocabulary learning. Although Romanian students have a wide range of digital instruments to learn and practise vocabulary at their disposal, they mostly use the least intrusive ones and the ones which do not imply extensive repetition of vocabulary items.

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