System 106 (2022) 102772

Contents lists available at ScienceDirect

System

journal homepage: www.elsevier.com/locate/system

The use of online dictionaries in video-mediated L2 interactions for the social accomplishment of Virtual Exchange tasks

Fulya Çolak [a,1,*], Ufuk Balaman [b,2]

[a] School of Foreign Languages, İzmir Institute of Technology, Turkey
[b] Department of English Language Teaching, Hacettepe University, Turkey

ARTICLE INFO

Keywords:
Multimodal conversation analysis
Video-mediated interaction
Online dictionary use
Telecollaboration
Interculturality
Technology-mediated TBLT
CALL
Virtual exchange

ABSTRACT

Mobile applications and dedicated websites as online dictionaries have been common resources in language learning and teaching settings for years. Primarily used for looking up unknown words in reading, writing, and vocabulary learning activities, online dictionaries have been considered highly feasible, individual learning materials. However, their situated use in synchronous video-mediated interactions has remained largely unexplored despite their potential to help L2 learners resolve word-knowledge-related troubles, thus creating opportunities for meaning negotiation. Using Multimodal Conversation Analysis, this study describes the active use of online dictionaries in task-oriented video-mediated L2 interactions of Virtual Exchange participants in higher education. The close examination of the screen-recorded interactions shows that online dictionaries play an essential role in the social accomplishment of intercultural tasks. The findings indicate that L2 learners do not only look up unknown words, but they also look up the synonyms of already known words and validate their existing knowledge. Moreover, online dictionaries operate in a context-specific sequential environment consisting of diverse participant roles (describer/recipient), embodied actions, and grammatical action formats. Additionally, we observe that Wikipedia and image search emerge as supplementary tools to dictionary look-ups. The findings bring new insights into computer assisted language learning, video-mediated interactions, and Virtual Exchange.

1. Introduction

The use of dictionaries has been a common practice in second/foreign/additional language (L2) learning and teaching for many years. Although printed dictionaries still play a role in language education due to their historical prominence and lack of access to online tools in disadvantaged classroom environments, the widespread use of online dictionaries through dedicated websites and built-in glossing features of various software and online resources have decreased the extent of the utility of printed dictionaries. Consequently, online dictionaries have become the new norm, mainly for looking up unknown words. Easy access to online dictionaries via computers and mobile devices and the considerably reduced look-up time have substantially increased the usefulness of these tools especially in reading, writing, and vocabulary learning activities (McAlpine & Myles, 2003; Müller-Spitzer & Koplening, 2014).

* Corresponding author. School of Foreign Languages, İzmir Institute of Technology, Turkey.
E-mail addresses: fulyacolak2021@gmail.com (F. Çolak), ubalaman@gmail.com (U. Balaman).
[1] Address: İzmir Institute of Technology, Gülbahçe Campus, School of Foreign Languages, 35430, Urla, İzmir, Turkey.
[2] Address: Hacettepe University, Faculty of Education, Department of English Language Teaching, Beytepe, Ankara, 06800, Turkey.

https://doi.org/10.1016/j.system.2022.102772
Received 18 July 2021; Received in revised form 21 February 2022; Accepted 22 February 2022
Available online 17 March 2022
0346-251X/© 2022 Elsevier Ltd. All rights reserved.

The existing research interest in the use of online dictionaries dominantly for looking up unknown words in various activities has not been reflected in their use over the course of video-mediated interactions (henceforth VMI). Similarly, task enhanced Virtual Exchange (also known as online intercultural exchange and telecollaboration; cf. O'Dowd & Lewis, 2016 for an overview) settings have not been an exception. Previous research showed that task-oriented L2 VMIs require minute coordination of participants' orientation to talk without causing breakdowns in communication while privately retrieving task-related information from diverse resources online, thus engaging in screen-based activities (Author). Among these resources are online dictionaries that play a central role in concurrently moving forward the task as well as the talk. That is to say, online dictionaries are not only utilized for looking up the unknown words for individual reading, writing, and vocabulary learning activities, but they are also commonly harnessed in task-oriented L2 VMIs. The methodic ways that the participants of task-oriented L2 VMIs follow to use online dictionaries are also of utmost importance due to their potential to clearly show (i) when and why L2 learners need to visit online dictionaries and (ii) how a just-searched-for word from the dictionary is immediately brought into interaction, thus being used for language production purposes without any significant gaps between searching and using. Despite the significance, no study to date, to our knowledge, has explored the interactional management of online dictionary use in VMI settings.

With this in mind, the present study, using Multimodal Conversation Analysis (CA), closely examines screen-recorded dyadic VMIs of L2 (English) speakers from Turkey and Tunisia partnering in a Virtual Exchange project and completing online tasks in Skype or Google Hangouts on a weekly basis. By doing so, the study brings new insights into the active use of online dictionaries by L2 learners for searching, recalling, clarifying, using, and describing words on a turn-by-turn basis. Accordingly, rather than testing the effectiveness of the tools and being primarily concerned with the impact of them on vocabulary acquisition, we deal with the situated use of online dictionaries in real-time L2 interaction. The findings show that L2 communicative practices in and through VMIs are rich domains for exploring the functions of online dictionaries somewhat beyond the dominating associations of their use with writing, reading, and vocabulary learning activities.

2. Literature review

Echoing the central role of dictionaries in L2 education, the widespread use of dictionaries has been attracting CALL research interest for many years. Therefore, for a fuller understanding of when and why L2 learners use online dictionaries, a closer look at CALL research on the topic is essential. The initial research focus was on the differences between electronic (i.e. pocket dictionaries, dedicated software, and websites) and printed dictionaries (e.g. Chen, 2010; Corris et al., 2000; Dziemianko, 2010, 2012; Laffey, 2019; Laufer & Levitzky-Aviad, 2006; Loucky, 2010). In an earlier example, Koyama and Takeuchi (2004) compared the printed and electronic dictionaries and found that printed dictionaries were more useful for learners to remember the words and the look-up time did not indicate any significant differences. Laufer and Hill (2000), on the other hand, examined the link between the ways of L2 speakers' printed and electronic dictionary use and the impact of diverse dictionary use behaviors on vocabulary retention. They also compared the look-up preferences of the two groups of students and found that more frequent look-up resulted in higher retention scores. Despite the reportedly rich implications for L2 vocabulary learning, the lower levels of the feasibility of hand-held, pocket, electronic dictionaries facilitated the decline of the common use of these tools. Accordingly, these devices changed in shape to operate in mobile devices in the form of mobile applications (Lilley & Hardman, 2017) and dictionary websites/software, which we cumulatively refer to as online dictionaries in the present study.

Building on the wide recognition of dictionaries as tools for looking up unknown words for improving vocabulary knowledge (Nist & Olejnik, 1995; Gonzalez & Gonzales, 1999), or more broadly for vocabulary learning (Nation, 1989), the bulk of CALL research sought to understand the impact of online dictionaries on the learning (Collins, 2016; Wang, 2012) and retention of vocabulary (e.g. Chen, 2016; Dziemianko, 2010, 2017; Peters, 2007). Similarly, the use of online dictionaries in the form of glosses was investigated in reading (e.g., Abraham, 2008; Yanguas, 2009; Yun, 2011; Poole, 2012; Hu et al., 2014; Chen, 2014; Türk & Erçetin, 2014; Lee et al., 2017) and writing (e.g. Elola et al., 2008; Boonmoh, 2012) activities. Few studies examined L2 learners' preferences and attitudes regarding dictionary use and laid the ground for an overall understanding of dictionary use behaviors (e.g., Siegel, 2007; Nesi, 2013). According to Nation (2013), L2 learners were found to utilize dictionaries mainly for three reasons: (1) for comprehension (decoding) which covers both looking up unknown words during listening, reading, or translating practices, and confirming known words, (2) for production (encoding) comprising looking up unknown words, spelling, pronunciation, meaning, structure, collocations or derived forms, looking up synonyms, and correcting an error, and (3) for learning the unknown (or partially known) words chosen by the learners themselves. Further research evidence showed that L2 learners tend to utilize dictionaries for completing assigned course work and in-class activities to practice grammar, writing, reading, translation, speaking, and listening (Zheng & Wang, 2016).

By virtue of smartphones and tablets, new trajectories of dictionary use emerged. Pettitt (2017) reported that L2 learners make use of Google Images and picture dictionaries in non-instructional interactions. Greer (2019) revealed in fine-grained detail in his study that the online dictionary use helped participants resolve interactional troubles in mundane talk in a hairdresser in Japan and the looked-up word were later deployed in a different context, which indicates the impact of attentive use of dictionaries on word choice in interaction. In a similar vein, in their recent multimodal conversation analysis study, Eilola and Lilja (2021) investigated smartphone use across mundane and pedagogical interactions in and beyond the classroom. More specifically, by exclusively focusing on one participant, they described the operationalization of Google voice recognition to translate from Arabic to Finnish both in the classroom and in the marketplace and described the student's ability to monitor his own speech production to notice a missing component in his utterance and to retrieve assistance available on his smartphone. The focal participant resolved the word-knowledge-related trouble with the help of his smartphone, later displayed knowledge of the looked-up utterance, and reflected on the overall learning trajectory. Therefore, Eilola and Lilja (2021) presented a convincing case showing how an L2 learner drew on an online tool (i.e., Google

Translate, also see Musk, 2022) beyond the classroom for checking word meaning and later reused the previously checked words to construct social actions in classroom contexts.

Relatedly, dictionaries were found to facilitate autonomous learning inside and outside the physical borders of classrooms (Zheng & Wang, 2016). Overall, the bulk of research on online dictionary use addresses L2 learners' diverse interactional and pedagogical needs; however, the interactional affordances of online dictionaries while engaging in video-mediated interactions remain to be seen. Similarly, the real-time orientations to online dictionaries in social interaction and presenting the interactional role that such orientations play in meaning making on a moment-by-moment basis have been explored to a lesser extent (but see Greer, 2019; Eilola & Lilja, 2021). Another exception in this line of research is Barrow's study (2009) on electronic dictionary use during dyadic task-based L2 interactions of novice learners in Japanese EFL classrooms. Using Conversation Analysis as the research methodology, Barrow (2009) focuses on turn-taking, sequence organization, repair practices, and embodied actions of the participants in an environment of repetitive electronic dictionary look-ups and the relevant interactional achievements in the before, during, and after look-up stages. He documented the before-look-up practices of the participants as initiating an action and the emergence and display of a trouble source. The participants were reported to signal e-dictionary look-ups bodily through gaze and posture and verbally through cut-offs and/or stretching their utterances. During the look-up, the participants engaged in typing, sequentially claimed lack of knowledge, and explicitly marked the look-up with diverse vocal and non-vocal practices. Consequently, the online dictionary use led the dyads to the establishment of mutual understanding and intersubjectivity also required for task completion. As a result, the participants achieved to plan their turns and topic initiations by including the searched words. The findings, therefore, point to an alignment between the sequential organization of conversations and dictionary look-ups in interaction. Overall, Barrow (2009) described EFL learners' dictionary use for the social accomplishment of tasks by establishing and maintaining progressivity in L2 classroom discourse, which is of direct relevance to the scope of the present study.

Against this background, we set out to explore the online dictionary use of the participants in task-oriented video-mediated interactions in L2 English, and in doing so, aim to fill the gap in the literature regarding the dictionary use in situ. In what follows, we present the data and context, and the collection of cases analyzed using the methodological tools of Multimodal Conversation Analysis.

3. The data and context

The current study reports findings based on a Virtual Exchange (also known as telecollaboration, online intercultural exchange) project between a Turkish and a Tunisian university for a period of 3 weeks (Moalla et al., 2020). Within the scope of this project, 19 students from each partnering university carried out online tasks in pairs using Skype and Google Hangouts for video-mediated interaction (VMI). The tasks covered a range of intercultural topics such as food, music, traveling, popular culture, cinema of the respective countries and largely encouraged screen-based activities for task accomplishment. The task participants received task instructions appended to an e-mail including an instruction video and a task guidelines document for each task. In a period of three weeks and through six meetings, the dyads completed a total of 11 tasks. Their interactions were screen recorded using an online software operating in the background of the participants' devices. Based on a larger dataset (19 dyads), the current study deals with two dyads in particular (16 h 40min of screen recordings data). These two dyads were mainly selected to represent the entire dataset due to the quality and completeness of the recordings. Accordingly, we present findings based on the VMIs of these two dyads rather than providing a potentially misleading picture of the entire project. We also acknowledge that the data loss and diverging levels of quality in other parts of the dataset should be registered as a limitation, although we build our arguments carefully by tracking the entire social interactional history of the focal dyads whose data are of the highest quality and complete, which enables identifying all relevant cases. In the first dyad are Zeynep (ZEY), 22 years old and studying at the Department of English Language Teaching in the Turkish university, and Afifa (AFI), 22 years old and studying at the Department of English Literature in the Tunisian university. The second dyad includes Serpil (SER, 21 years old, Turkish) and Yasmine (YAS, 20 years old, Tunisian). All participant names are pseudonyms, and all delivered written consents for the present study.

The data collected from the VMIs of two dyads was transcribed using the conventions of Jefferson (2004) for talk and Mondada (2016) for embodied behaviors, and Author2 for screen-based activities. The close examination of the detailed transcripts without having any a priori assumptions showed that the participants drew on online dictionaries in order to move the task and the talk forward in mutually recognizable ways. Using Multimodal Conversation analysis (CA), we identified a total of 13 cases of word look-ups on dedicated dictionary websites and mobile dictionary applications (see Table 1 for the distribution of cases). In the subsequent section, we present representative extracts for the following uses of online dictionaries: (i) looking-up unknown words for telling and responding to the co-participant (Extracts 1 and 2) and (ii) looking for already known words for validating the meaning and finding synonyms (Extracts 3 and 4). While analyzing these extracts, we also provide evidence for the use of Wikipedia and Google (Image) for non-dictionary online searches operating as supplementary tools (cf. Cancino & Panes, 2021; Groves & Mundt, 2015) to ongoing dictionary-search-initiated trouble resolution mechanisms during word-knowledge-related trouble instances. Lastly, we observed that

Table 1
The distribution of online dictionary use in video-mediated interactions.

Online Dictionary Type	Unknown words	Checking already known word
Dictionary Website	7	3
Mobile Application	3	
Total	10	3

in all dictionary website visits, the participants used an online dictionary providing word-level translation only (see Figs. 5, 8 and 14 below). As for the mobile application, we do not have access to the specific dictionary utilized but can identify the dictionary look-ups based on the sequential evidence embedded in VMI.

4. Analysis: online dictionary use in video-mediated interactions

We describe the online dictionary use in task-oriented L2 VMIs in two main categories; (4.1) looking up unknown words and (4.2) looking up already known words. In both categories, we observe the participants' efforts to resolve word-knowledge-related troubles. We present two extracts in each subsection, the first of each presenting the interactional use of online dictionaries for designing response turns and the second presenting the telling, explaining, and describing a word.

4.1. Looking up unknown words

In Extract 1, the task participants engage in an intercultural task that requires describing and guessing a number of cultural objects through a one-way information gap (Fig. 1). AFI describes the object (evil eye) based on the task instruction (try to describe what you see on the screen) and ZEY tries to guess the target word described by the co-participant (listen carefully to the other party, and try to guess the souvenir described). The extract marks the beginning of the task engagement process.

The extract starts with a task initiation sequence. In lines 1 and 2, AFI shows her understanding of the task instruction and describes the course of incipient actions that she will perform in the following turns. ZEY gives verbal (lines 3 and 5) and embodied (nodding in line 5) go-ahead responses and in what follows, AFI delivers an extended word description. We should note here that AFI uses Wikipedia to describe the target word and draws on the entry on the relevant page by quoting it (lines 9–12). In line 13, ZEY claims understanding in an overlapping fashion but calls it a *thing* rather than producing the target word. Subsequently, AFI restarts the overlapping part of her turn in line 15 and completes the description along with the circling finger gesture. In line 17, ZEY displays embodied understanding of the target word and echoes the circling finger gesture while also verbally uttering her candidate understanding (something like eyes). Her candidate response is confirmed by AFI in line 18, and this is acknowledged by ZEY in line 19. However, ZEY does not deliver the target word yet, which leads AFI to extend her previous description with another detail (and it is blue) and a turn-final confirmation token oriented to ZEY's embodied action. Following 1sec of silence, ZEY takes the turn and delivers an incomplete and disrupted turn with two hesitation markers and 1.1sec of silence in between. Although she is visibly preparing to make a verbal contribution in line 23 implicated with the lip parting, she, instead, deploys a finger raising and withdrawing gesture and a concurrent verbal alert to an incipient screen-based activity (i will search it) (Author) completed with turn-final laughter. Her embodied action and the verbal alert are treated by AFI as an implicit request to perform a non-talk activity, and AFI's acknowledgment and nodding in line 25 operate as the granting of this request and gives space for ZEY to perform the activity. Here, the activity is to look up an unknown (or forgotten) word from the online dictionary on ZEY's mobile phone. She shows the continuation of her search by maintaining her eye gaze down towards her phone, deploying non-lexical vocalizations (err), and prolonged silences. Finally, immediately after averting her eye gaze from the mobile phone, ZEY delivers the target word and marks its candidacy with the final intonation in line 29 (evil eye↑). Despite AFI's confirmation, ZEY produces her candidate answer again, this time with hedging (>or something like−<). Following AFI's second confirmation, ZEY and AFI collaboratively mark the task completion with clapping, laughing, leaning back, and loud production of *yeah*.

All in all, Extract 1 has shown that participants of task-oriented L2 VMIs use online dictionaries in order to move forward with the task as well as the talk. In this instance, ZEY has initiated the look-up to complete the task by primarily creating a space of temporary suspension to talk. She has secured this space by alerting the co-participant to this action and hearing her acknowledgment. Therefore, the look-up process has been initiated, maintained, and completed as a socially accomplished practice in ways that are recognizable to both parties. Another observation from the extract is ZEY's preference for using the mobile phone to execute the search. Although this issue has not been brought into interaction, thus remaining beyond our analytic reach, this might be due to (i) her existing habits of look-up practices and (ii) preference to maintain the "talking heads" formation on the screen (Licoppe & Morel, 2012) while doing the

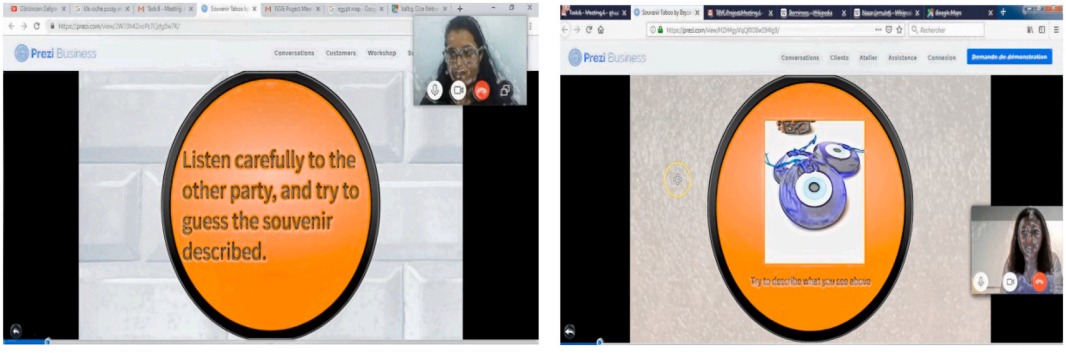

Fig. 1. A screenshot from ZEY (left) and AFI's (right) screens in Extract 1.

1	AFI:	i got a picture↓ (1.0)
2		so: (0.3) i [should describe it >to you<
3	ZEY:	[oka:y
4	AFI:	okay
5	ZEY:	*yeah*
		nods
6		1#(0.6)#1
		1# (Figure 2): AFI clicks on the Wikipedia page on Nazar (amulet).

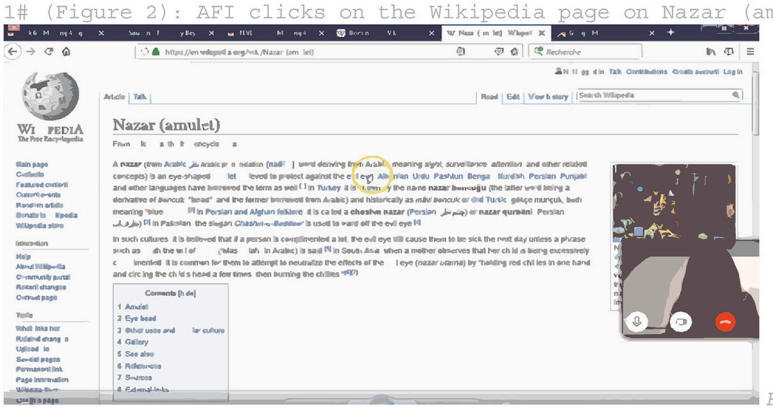

Figure 2

7	AFI:	so:: (.) okay so it is errr: (0.7)
8		okay↓ (0.4) it is an eye↑ (0.5)
9		shaped (0.7) amulet↑ (0.6)
10		it is believed tha: (.)
11		it protects against the evil eye↑ (2.0)
12		it is a: [it's a circle
13	ZEY:	[a: *+i understand *ss thing
	zey	*-------2------*
		2: swings back and forth
	afi	+circles her finger --->
14		(0.3)
15	AFI:	it is a circle and it has an eye↓ (0.2) in it+↑
		----->+
16		(0.4)

Extract 1. Using a mobile dictionary app for looking up an unknown word.

look-up. Finally, we have seen that AFI used Wikipedia to describe the target task-relevant word rather than using an online dictionary (e.g., English-to-English), which might imply that online dictionaries are largely associated with their translational functions rather than retrieving contextual cues that would be useful for word descriptions. In any case, this finding indicates a previously unexplored use of Wikipedia, which is an additional tool to the online dictionaries for word descriptions.

Extract 2 showcases another instance of looking up unknown words, this time for describing a word rather than guessing it. Unlike the task in Extract 1, the task participants (YAS & SER) are not required to engage in word description/guessing in line with the task design; however, the need to use online dictionaries emerges to resolve word-knowledge-related trouble in order to move the task and the talk forward. The task design includes creating a list of touristic destinations in the respective countries of the participants based on their likes/dislikes. For this purpose, the participants talk about their likes/dislikes and relate them to intercultural similarities and differences (i.e. coffee culture).

The extract starts with a task-oriented discussion on a potential domain of intercultural similarity (same type of coffee) regarding the coffee cultures of the participants' countries. After a few lines, SER shows agreement with the similarity in line 9 (it's almost the same). In what follows, SER elaborates on the similarity and starts providing accounts by describing the taste of the coffee (it taste sour). However, she initiates an i-mean prefaced self-repair in line 14 yet fails to produce the L2 equivalent of the target word for describing the taste (acı; translates *bitter*) and apologizes for this (sorry) in line 15. The apology follows the finger raising (Fig. 4) and SER's embodied behavior projects an incipient screen-based activity. Similar to the earlier extract, the word-knowledge-related trouble leads the participants to draw on available online resources, primarily an online dictionary. After delivering the target word in L2 in turn-initial position in line 17, SER produces an information-seeking question (°what's that°) with a low voice, which might be heard as an instance of private speech (Hauser, 2015; Kohler & Thorne, 2011). In the same turn, she also alerts the co-participant to an incipient search (Author), another resource that was visible in the earlier extracts. SER's online dictionary search gives results (3#) at the end of her verbal alert in line 17, and she delivers the L2 equivalent of the target word in line 18 (bitter). In line 19, she replaces the earlier taste marker (sour) with the one she found as a result of a dictionary look-up (it taste bitter). YAS displays understanding by repeating the target word and deploys a change of state token (ha) in line 21. Following the resolution of word-knowledge-related

```
17  ZEY:  #it is something like eyes↑ (.)
    zey   #Figure 3-->line 20
```

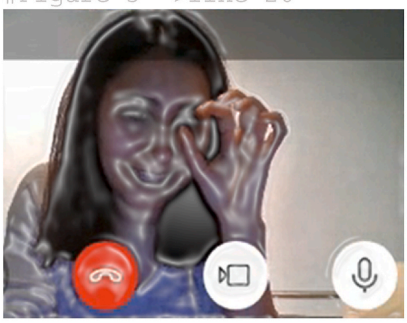

Figure 3

```
18  AFI:  +YES+↑
          +nods+
19  ZEY:  right↑
20  AFI:  and it is blue YEAH#↑
                        --->#
21        (1.0)
22  ZEY:  okay err: its name is (1.1) err:+
23        +(1.5)+
          +--3--+  3:lip parting
24        *i will* search ♥it ♦ah ↑hahhh
          *--4---*        ♥checks a word from her phone-->line 30
                             ♦laughs --->
          4:raises finger and withdraws it
25  AFI:  ♦+okay+
          +nods+
       --->♦
26        (1.1)
27  ZEY:  err: (0.6) err:
28        (5.4)
29        err ♥evil eye↑ (0.2)
          --->♥
30  AFI:  +yeah+
          +nods+
31  ZEY:  err: >or something like—< (.)
32        evil eye↑
33  AFI:  +yes↑+
          +nods+
34        (0.3)
35  ZEY: *YEAH* ♥okay♦+
          *--3-* ♥claps -->
          3: leans back
                      ♦laughs -->
    afi                +laughs -->
```

Extract 1. (*continued*).

trouble using an online dictionary and establishing mutual understanding, the participants exchange somewhat jocular turns about adding sugar, and the extract ends.

Extract 2 has shown another instance in which online dictionary use has been a central practice for moving the task and the talk forward. An unknown word has been retrieved from the web-based dictionary, and the telling participant has managed to complete her word description oriented to the focal topic of the intercultural task. This extract has provided a different sequential environment than the earlier extract in that the dictionary look-up has been conducted by the teller, not the recipient as in Extract 1. Also, the search device varies from the mobile phone (Extract 1) to a web-based dictionary (Extract 2). Moreover, we see that although the aim of the

1 YAS: i think=i think we have like the same *type of coffee:↓
*points with index fingers--->
2 (0.4)
3 SER: ye:s*
--->*
4 (0.6)
5 YAS: like (1.0) yeah↓
6 +(1.1)+
ser +nods-+
7 [i think
8 SER: +[it's +
ser +frowns+
9 it's it's almost the same+(.)+
ser +nods+
10 YAS: like [our coffee↓
11 SER: +[it taste
ser +frowns--->
12 YAS: and your coffee↓
13 SER: yes it taste sour (0.3) a bit↓
14 (0.8)
15 +i mean acı

ser-->+ *bitter*
16 #uh [1#]sorry[#1]↑ (.)
ser #Figure 4

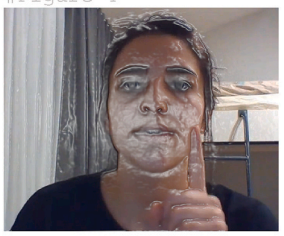

Figure 4

1#: SER clicks and opens the dictionary website.

17 YAS: ouhh
18 SER: acı °[2#]what's that[#2]° i will search [3#]it now[#3]
bitter
2#: SER types 'acı' (bitter) in the search bar of the dictionary website and executes the search.
3# (Figure 5): SER moves the cursor on top of 'bitter' translation.

Figure 5

19 (0.5) +yes+ (0.4) bitter↑
ser +-2-+ 2: leans forward
20 (0.6) it taste bitter↑ yes
21 YAS: *bitter* (0.4)
*looks*upwards
22 ha↑ (0.6)
23 you can a:dd some sugar always↑ (0.3)
24 you know↓ (0.2)
25 SER: but i *don't* +(0.2)+ use sa- sugar ♪(0.9)♪
yas *laughs*
ser +laughs+ ♪laughs♪

Extract 2. Using a dictionary website for looking up an unknown word.

search has not been to retrieve a synonym (Extract 3), SER has managed to recognize the target word relevant to the micro-context of the interaction among other potential choices (see Fig. 5), which opens a window to identify her vocabulary knowledge to some extent. Another observation to note here is that SER deploys the retrieved word without any trouble in recalling later in the process (2 weeks later). We do not seek longitudinal evidence for the impact of online dictionaries on vocabulary learning in the present study; however, this observation indicates rich learning opportunities emerging through the situated use of online dictionaries.

4.2. Looking up already known words

In this section, we present two cases that show how the task participants look up already known words to provide synonyms as alternative trouble resolution mechanisms oriented to word-knowledge-related troubles (Extract 3) and to validate their knowledge of the word (Extracts 3 & 4). We should note here that we refer to word knowledge only when it is displayed in and through talk-in-interaction and made accessible to the co-participant, thus to the researchers. Extract 3 includes an instance of looking up synonyms of a just-produced word in order to ensure its recognizability by the co-participant and using Google (image) search as a supplementary tool in doing so. The focal task in the extract requires creating an imaginary recipe that would appeal to both cultures, therefore aiming to promote intercultural exchange between the participants.

Extract 3, in mid-task position, starts with a question in line 1 which is cut-off by YAS's completion of what SER has already meant to deliver as an ingredient proffer that becomes evident in the next turn (line 3). In what follows, both participants express their love of olives, thus mutually establishing their agreement for including *olive* in the task solution. Similar to Extract 1, here, another participant, SER deploys finger raising (Fig. 6) and pointing gestures (Fig. 7) consecutively before delivering a candidate answer, and more specifically using an online dictionary. She primarily gives a candidate ingredient (corns) also by self-repairing it in the same turn

```
1   SER:  do we need to [add o-
2   YAS:                [>yes* yes< (.) we add (.) olives
                          *leans her head towards left--->line 6
3   SER:  olive an:d=
4   YAS:  =yes, i love (.) i love olives
5   SER:  and me too=
6   YAS:  =do do you like ↑o*lives+ (0.2) +
    ser                   --->*     +gazes up+
7   SER:  ♣yes♣ (0.4)
          ♣nods♣
8         *and the:*+ (1.4)
          *Figure 6*+----------------Figure 7-->
```

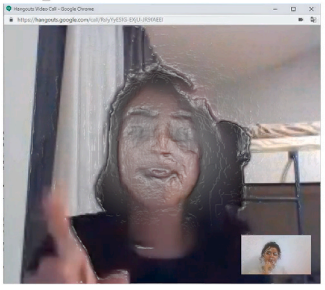

Figure 6

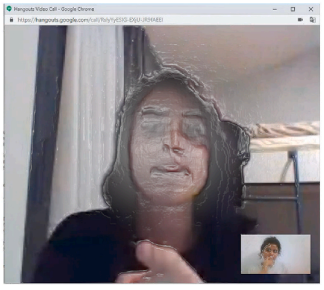

Figure 7

```
9         corns (.) i mea:n (0.5)+ ♪uhm °1#yellow#1 corns°
                                   ---->+ ♪leans forward-->>>
          1# SER clicks and opens the dictionary website.
10        (1.5)
11        ♥uhm sorry (2#2.6)
          ♥gazes down,,,,,starts typing
12        #2it is °corn°
          2# SER types "mısır" (corn) on the search bar.
```

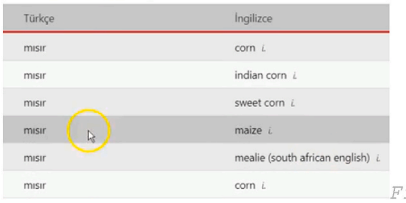

Figure 8

```
13  YAS:  i don't know=
14  SER:  =↑yes=
```

Extract 3. Using a dictionary website for looking up the synonym of an already known word.

```
15  YAS:  =♥what's that
          -->♥
16        (0.5)
17  SER:  sweet corn i mea:n ♣(1.1)♣
    ser                      ♣gazes♣towards her right
18        3#dur i will (.) send#3 the=
           wait
          3# SER opens a Google search tab.
19  YAS:  @=ahh *ahh (.)
          @nods her head------>
    ser          *laughs-->
20        >■yes ♦yes<♦]@ like maize (.) *yeah yeah*
    yas    ■puts her finger to her chin--->>>
    yas         ♦nods♦
    yas           --->@              *nods twice*
21  SER:  4#yes*
         4# SER types "mısır" (corn) and executes a Google search.
          --->*
22        (1.7)
23  YAS:  yes (.) yes (.)
24        it's it's hhh (0.3) ■#4it's delicious ↑too+
                              ---->■
   ser                                          +leans back-->>>
25  SER:  yes (0.4) ↑oka:y (1.2) ↑>okay<
```

Extract 3. (*continued*).

(yellow corns). However, before hearing YAS's response to her candidate, she opens up the online dictionary on her screen possibly to check the validity of her word choice. In line 12, she apologizes, visibly and audibly starts typing, and retrieves dictionary search results very quickly. Upon the retrieval of the results at #2 in line 12, she vocalizes the first result that is the same as she told earlier. However, YAS claims no knowledge in return and asks an information question in line 15 (what's that). SER, moving the cursor through the dictionary search results, tells the third result (sweet corn) and initiates another i-mean-prefaced self-repair but does not deliver any, instead, 1.1sec of silence emerges. Subsequently, SER deploys a turn-initial request for wait time in her first language (dur; translates *wait*), alerts YAS to an incipient screen-based activity (Author), and opens a Google search tab possibly to send an image of the target word to the co-participant (4# Google search, but not image search). Without any need to proceed for further cues, YAS displays understanding (sequentially oriented to sweet corn in the previous turn) with change of state tokens (Heritage, 1984) in line 19 and by providing a synonym (maize) for the *corn*. We should note that the *maize* is the fourth result in SER's dictionary search right under the sweet corn which led the participants to the resolution of word-knowledge-related trouble in the task-oriented L2 VMI. SER's confirmation in line 21 might be referenced to her awareness of all search results, however, we do not have evidence for this except for a quick scrolling up and spontaneous cursor movement (see the description of #2 in the transcript). At the end of the extract, the participants establish mutual agreement for another ingredient. SER's private screen-based activity after confirming YAS's production of *maize* might be noted as a precautionary effort in case the trouble might be maintained. However, the mutual agreement sequence at the end completely resolves the trouble, and SER does not produce any turns based on the search results.

We have seen in Extract 3 that online dictionaries are also used for checking already known words for the purpose of validating the knowledge and looking up the synonyms. Accordingly, SER has given a synonym, that was the third result in her search, as a candidate and intended to proceed with possibly an image search to provide further means to establish mutual understanding. Therefore, this extract has shown that online dictionaries are used for the re-establishment of intersubjectivity halted due to trouble in word knowledge, and synonyms are used to resolve such troubles. Moreover, images from Google search results are at the disposal of the participants as further means to resolve troubles over the course of word descriptions, which also implies that Google image search can be used as a supplementary tool similar to what is largely known as pictionaries (Rahman et al., 2017). Finally, we would like to note that in resolving word-knowledge-related troubles, online dictionaries become essential tools not only in guessing the teller's target word but also in telling to describe the target word as is shown in Extracts 2 and 3.

In Extract 4, the task participants engage in an intercultural task that requires describing culture-specific souvenirs (entitled: Pick Your Gifts!) in a list of 15 cultural objects. One of them is carpet/kilim, and YAS initiates a description with reference to the production stages of the object in Tunisia prior to the extract. In response, SER engages in a search for an alternative word to describe the type of the carpet that YAS has been describing. The extract marks the beginning of SER's word search and the middle of the task engagement process.

In line 1, SER utters an epistemic stance marker (i don't think) and looks upwards and away to indicate the initiation of a word search with a thinking gesture (Fig. 9). Subsequently, she elaborates on the rationale for her search (i mean carpets are thinner than the) and engages in another embodied action (Fig. 10) to describe the word that she is searching for. However, she leaves the turn

1 SER: #°i don't° (0.6) °think° (0.4)
ser #fig.9

Figure 9

2 +i mean carpets +are: ♥thinner♥ ♪than ♪the#
ser +opens right palm+
ser ♥---4---♥
4: lowers her left hand with her palm facing the ground
ser ♪moves♪her left hand right to left
ser #fig.10

Figure 10

3 (1.0)
4 SER: +the:+ ♥rugs
ser +-6--+ 6: gazes towards up right

ser ♥gazes towards up left -->line 28
5 i mean♥ (0.2) +°yes rugs°+ [♪°yes°♪
ser -->♥
ser +gazes towards up right
ser ♪nods♪
6 YAS: [rugs↑-
7 +(1.2)
ser +plays with her fingers -->line 33

8 SER: the car[pets #are-
yas #fig.10

Figure 11

Extract 4. Using a dictionary website for validating an already known word.

incomplete and 1.0sec of silence occurs. In line 4, she resolves her own word search (the rugs) without using any external epistemic resources such as online dictionaries. In line 5, she utters repetitive confirmation tokens around the candidate word (yes rugs yes) possibly marking her remembering marked with gazing upwards and nodding in the turn-final position. YAS's repetition of the candidate word overlaps with SER's turn completion and includes rising intonation (rugs↑) that displays trouble in understanding. After 1.2sec of silence, SER attempts to reinitiate the word description in overlap with YAS's change of state token (ouh↓) (Heritage, 1984) and the repetition of the candidate word with rising/questioning intonation (rugs↑) again, which blocks SER's continuation. Let us note that YAS's production of the candidate word with rising intonation shows that the mutual understanding has not been

9 YAS: [ouh↓ 1#rugs↑
1# YAS clicks on Google Image Search and scrolls down and up on the page and keeps the same page open until the end of the extract.

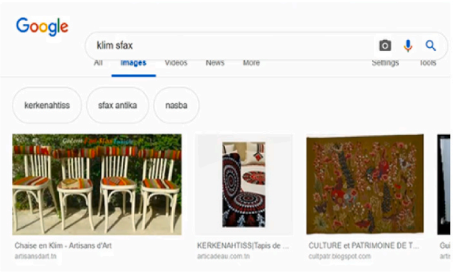

Figure 12

10 (1.1)+
ser --->+
11 SER: #i mean like this
ser #fig.13


Figure 13

12 2#(0.7)#2
2# SER clicks and opens the chat box of Hangouts.
13 SER: °we:° 3#(0.6) °kind of° hehe
14 (1.1)#3
3# SER types "rug" on the text box and sends it.
15 rug
16 (1.9)
17 if i remember↑ (0.2) correct
18 (0.3) rug °right↓°
19 4#(1.1)#4
4# SER clicks and opens the dictionary website.
20 hh 5#anyways↑#5
5# SER types "rug" on the search bar/fig14

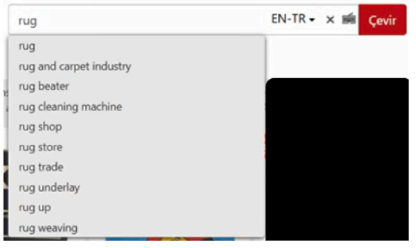

Figure 14

21 (2.0)
22 er (0.7) the other list

Extract 4. (*continued*).

established yet. Additionally, YAS gazes at the screen attentively that is also marked with the position of her hand along with the maintained gaze (Fig. 11) and navigates through her screen including the Google Image Search page (1# and Fig. 12) with rug-like results (i.e., klim; *translates* rug). Following 1.1sec of silence, SER takes the turn with another i-mean prefaced structure and uses a finger-raising gesture to explicitly ask for the suspension of talk for her incipient screen-based activity (2# in line 12). SER's activity is oriented to activate an affordance of the meeting space, the chat function, and she types and sends the candidate word using the chat box by the end of line 14. Here we see that SER attributes the ongoing lack of mutual understanding to the pronunciation of the word; therefore, she inserts an additional modality to resolve this trouble. However, YAS does not show any orientations to the chat box or any displays of understanding. In line 15, SER produces the candidate word for the fourth time (including the text message) in the extract. Following the prolonged silence in line 16, seeing that YAS has not displayed understanding yet, SER engages in questioning

her own knowledge (or memory) of the word (if i remember↑ (0.2) correct) and ends her turn with a turn-final question tag (°right↓°). Finally, in response to the emergent need to validate her knowledge of the word, she opens the online dictionary which was readily available on her screen, and searches for *rug* (Fig. 14). Synchronous to the preview of the results on her screen which validates her knowledge, SER uses "anyways" as a sequence-closing device (Park, 2010) and transitions into another cultural object in the list. Her closing in this instance is possibly related to the fact that YAS is the one who initiated the telling, thus claiming cultural ownership and the deontic rights to describe the cultural object. Therefore, YAS's non-understanding implies that SER's contribution to YAS's description is not receipted which leads to the withdrawal of the candidacy of the word, *rug*.

The final extract of the study has shown another instance in which online dictionaries are used for looking up already known words for the purpose of validating existing knowledge. This extract has provided a different sequential environment than the earlier extract. Although SER has managed to contribute to task-oriented interaction, the word meaning negotiation has not resulted in the establishment of mutual understanding, which has eventually led SER to question her knowledge and to use an online dictionary for this purpose. We discuss these findings in the following section.

5. Discussion and conclusion

In the present study, we aimed to understand when and how L2 learners used online dictionaries in publicly observable ways in video-mediated interactions and how these look-ups play out in real time for the social accomplishment of Virtual Exchange tasks. Using Multimodal Conversation Analysis as the research methodology, we found that the use of online dictionaries plays a central role in moving forward the task and the talk concurrently. The findings bring a number of new insights into research on computer assisted language learning, Virtual Exchange, and video-mediated interaction.

To start with, we explored that the participants did not only retrieve unknown words from the online dictionaries, but they also checked the validity of their existing knowledge and looked up for synonyms to better describe the target words. Therefore, the dictionaries proved to be functional in social interaction as well, which goes beyond their commonly recognized associations with reading (e.g. Collins, 2016; Koyama & Takeuchi, 2007; Wang, 2012) and writing (e.g. Elola et al., 2008; Boonmoh, 2012) skills and vocabulary learning (e.g. Gonzalez & Gonzales, 1999; Hu et al., 2014; Nation, 2013). This finding also adds to the overall understanding of the usefulness of online dictionaries (McAlpine & Myles, 2003; Müller-Spitzer & Koplening, 2014). What is more, the participants skillfully incorporated the dictionary search results into their turns spontaneously, which demonstrates the current level of the look-up time. Also related to the usefulness, we found that the participants preferred online dictionaries for word-level look-ups and drew on additional sources (i.e. Wikipedia and Google search) for contextual cues to be used in the design of the description turns. This finding leads us to conclude that online dictionaries would be more feasible if they are enriched with larger amounts of in-context word descriptions along with the usual word-level ones. Related to this, we should also note that there was not much diversity in the online dictionaries utilized in the dataset. Therefore, other dictionaries with existing contextual cues can readily respond to this call. Nevertheless, this implication also aligns with the ever-growing impact of multimedia glossing on vocabulary learning (e.g. Yanguas, 2009; Türk & Erçetin, 2014) and calls for future research addressing the social interactional use of diverse online dictionaries.

An earlier effort addressing this was Barrow's study (2009). In alignment with Barrow's research, we found evidence for sequential sensitivity of the dictionary look-ups (also see Greer, 2019; Eilola & Lilja, 2021). The sequential position of the look-ups varied and the tellers (i.e. the participant describing the word) looked up words as much as the recipients (i.e. the participant guessing or responding to a word description) did so. Additionally, the online dictionary look-ups were strategically devised to resolve word-knowledge-related troubles in all cases. We also explored in the sequential environment of dictionary look-ups that the participants bodily signaled their incipient look-ups (e.g., finger raising) and verbally alerted the co-participants to incipient breaks by drawing on routine grammatical action formats (e.g., i will search it). Altogether, a closer look into the setting made it possible for us to identify the use of online dictionaries for turn design, sequence organization, repair, and embodiment, which directly indicates L2 interactional competences of the participants (see Skogmyr Marian & Balaman, 2018 for an overview). By strategically deploying diverse social interactional resources (i.e., turn-taking, sequence organization, repair, embodiment) and carefully drawing on the technological affordances of the context (i.e. dictionary websites, mobile applications, Wikipedia, Google Image search, chat box etc.), the participants managed to utilize the inherent opportunities available in the focal setting and consequently to display their interactional competences. This finding is particularly important to better argue for the context-specificity of the construct, L2 interactional competence (cf. Pekarek Doehler & Berger, 2018). The focal setting requires the maintenance of dual progressivity; the talk and the task. The interface of both, therefore, marks the interactional architecture of task-oriented video-mediated L2 interaction and the context-specific interactional competences that the participants can display or develop in task enhanced Virtual Exchange settings. Accordingly, the findings call for a closer look at the various online accessible tools that are deployed in situ by the participants. These tools include diverse online dictionary service as utilized by the participants in our study but can only be extended to tools such as Wikipedia and Google services like web search, image search, and Translate (e.g., Cancino & Panes, 2021; Groves & Mundt, 2015; Musk, 2022), which can be considered as strong alternatives to perform word searches due to their increasing operational capacity (van Lieshout & Cardoso, 2022).

Furthermore, the micro-level investigation into the screen-recordings dataset came out methodologically feasible. By synchronizing the two separate screens for the multimodal conversation analytic examination, we had an opportunity to see the moment-by-moment utilization of the online dictionaries. Therefore, the data collection method, as well as the research methodology, helped us reach a level of fine-grained detail so as to fully depict the emergence, negotiation, and making of meaning in Virtual Exchange tasks (Canals, 2021). Without the micro-level look and the screen-recordings data, it would not be possible to identify the fact that the participants are able to select from multiple dictionary search results, use the dictionaries for validating their existing knowledge, and

the centrality of dictionaries (i.e., always open on their browsers) for their intercultural talk. To these ends, the robust methodological tools of Multimodal Conversation Analysis enabled seeing the situated word search practices of the participants, which marks a significant implication for dictionary compilers, researchers, end-users, and the developers of relevant online tools. Also as a result of the methodological perspective adopted for the present study, we argue that it is possible to track the longitudinal impact of searched-for words on vocabulary learning. We noticed one case in which the word *bitter* (looked-up for its translation from Turkish to English) was used later in the process. Therefore, future research on the topic can take a closer into the longitudinal evidence for learning and retention of L2 vocabulary (cf. Dziemianko, 2017; Nation, 2013; Peters, 2007) in and through Virtual Exchange practices. Against this background, we would also like to call for more interest in Virtual Exchange partnerships for L2 learners seeing that they provide rich interactional opportunities and create ample ground for interculturality, especially when combined with carefully designed tasks. An additional implication for L2 pedagogy overall can be proposed for L2 teacher education. The findings showed that creating effective tasks for L2 learners has the potential of providing rich opportunities for negotiating word choices, reflecting on look-up practices in situ, and consequently for maintaining the progressivity of L2 interaction. Thus, we argue that it is imperative to equip pre/in-service teachers with necessary skills to design appropriate tasks for either virtual or classroom settings in order that they would find means to gain an understanding of how L2 learners can engage in authentic use of online tools and how the task-oriented processes can create rich learning opportunities (cf. Badem-Korkmaz et al., 2022; Ekin et al., 2021; Balaman, 2021; Balaman & Pekarek Doehler, 2022). Lastly, we acknowledge that our study has suffered from some limitations (i.e., technical troubles encountered during the collection of screen-recordings data and relatively small collection of cases), which would be useful to consider in designing future research and language learning environments.

Author agreement statement

We the undersigned declare that this manuscript is original, has not been published before and is not currently being considered for publication elsewhere.

We confirm that the manuscript has been read and approved by all named authors and that there are no other persons who satisfied the criteria for authorship but are not listed. We further confirm that the order of authors listed in the manuscript has been approved by all of us.

We understand that the Corresponding Author is the sole contact for the Editorial process. He/she is responsible for communicating with the other authors about progress, submissions of revisions and final approval of proofs.

CRediT authorship contribution statement

Fulya Çolak: Conceptualization, Methodology, Investigation, Writing – original draft, Formal analysis. **Ufuk Balaman:** Supervision, Visualization, Formal analysis, Writing – review & editing.

References

Abraham, L. B. (2008). Computer-mediated glosses in second language reading comprehension and vocabulary learning: A meta-analysis. *Computer Assisted Language Learning, 21*(3), 199–226.

Badem-Korkmaz, F., Ekin, S., & Balaman, U. (2022). Pre-service language teachers' resistance to teacher trainer advice on task design for video-mediated L2 interaction. *Classroom Discourse, 13*(1). https://doi.org/10.1080/19463014.2021.2020144

Balaman, Ufuk (2021). The interactional organization of video-mediated collaborative writing: Focus on repair practices. *TESOL Quarterly, 55*(3), 979–993. https://doi.org/10.1002/tesq.3034

Balaman, Ufuk, & Pekarek Doehler, Simona (2022). Navigating the complex social ecology of screen-based activity in video-mediated interaction. *Pragmatics. Quarterly Publication of the International Pragmatics Association (IPrA), 32*(1), 54–79. https://doi.org/10.1075/prag.20023.bal

Barrow, J. (2009). *Electronic dictionary use in novice L2 learner interaction*. Philadelphia: Ph.D. dissertation, Temple University. https://www.learntechlib.org/p/117447/.

Boonmoh, A. (2012). E-dictionary use under the spotlight: Students' use of pocket electronic dictionaries for writing. *Lexikos, 22*, 43–68. https://doi.org/10.5788/22-1-997

Canals, L. (2021). Multimodality and translanguaging in negotiation of meaning. *Foreign Language Annals*, 1–24.

Cancino, M., & Panes, J. (2021). The impact of Google Translate on L2 writing quality measures: Evidence from Chilean EFL high school learners. *System, 98*, 102464.

Chen, Y. (2010). Dictionary use and EFL learning. A contrastive study of pocket electronic dictionaries and paper dictionaries. *International Journal of Lexicography, 23*(3), 275–306. https://doi.org/10.1093/ijl/ecq013

Chen, I. J. (2014). Hypertext glosses for foreign language reading comprehension and vocabulary acquisition: Effects of assessment methods. *Computer Assisted Language Learning, 29*(2), 413–426.

Chen, Y. (2016). Dictionary use for collocation production and retention: A call-based study. *International Journal of Lexicography, 30*(2), 225–251. https://doi.org/10.1093/ijl/ecw005

Collins, J. B. (2016). Changes in electronic dictionary usage patterns in the age of free online dictionaries: Implications for vocabulary acquisition. *APU Journal of Language Research, 1*, 36–49.

Corris, M., Manning, C., Poetsch, S., & Simpson, J. (2000, August). Bilingual Dictionaries for Australian Languages: User studies on the place of paper and electronic dictionaries. In U. Heid, S. Evert, E. Lehmann, & C. Rohrer (Eds.), *Proceedings of the ninth EURALEX international congress, EURALEX* (pp. 169–181).

Dziemianko, A. (2010). Paper or electronic? The role of dictionary form in language reception, production and the retention of meaning and collocations. *International Journal of Lexicography, 23*(3), 257–273. https://doi.org/10.1093/ijl/ecp040

Dziemianko, A. (2012). On the use(fulness) of paper and electronic dictionaries. In S. Granger, & M. Paquot (Eds.), *Electronic lexicography* (pp. 319–342). Oxford University Press. https://doi.org/10.1017/CBO9781107415324.004.

Dziemianko, A. (2017). Dictionary form in decoding, encoding and retention: Further insights. *ReCALL, 29*(3), 335–356. https://doi.org/10.1017/S0958344017000131

Eilola, L. E., & Lilja, N. S. (2021). The smartphone as a personal cognitive artifact supporting participation in interaction. *The Modern Language Journal, 105*(1), 294–316.

Ekin, S., Balaman, U., & Badem-Korkmaz, F. (2021). Tracking telecollaborative tasks through design, feedback, implementation, and reflection processes in pre-service language teacher education. *Applied Linguistics Review*. https://doi.org/10.1515/applirev-2020-0147
Elola, I., Rodriguez-Garcia, V., & Winfrey, K. (2008). Dictionary use and vocabulary choices in L2 writing. *ELIA, 8*, 63–89.
Gonzalez, O., & Gonzales, O. (1999). Building vocabulary: Dictionary consultation and the ESL student. *Journal of Adolescent & Adult Literacy, 43*(3), 264–270. https://doi.org/10.2307/40012150
Greer, T. (2019). Noticing words in the wild. In J. Hellermann, S. W. Eskildsen, S. Pekarek Doehler, & A. Piirainen-Marsh (Eds.), *Conversation analytic research on learning-in-action* (pp. 131–158). Cham: Springer.
Groves, M., & Mundt, K. (2015). Friend or foe? Google translate in language for academic purposes. *English for Specific Purposes, 37*, 112–121.
Hauser, E. (2015). Private speech as social action. *Language and Sociocultural Theory, 2*(2), 119–138.
Heritage, J. (1984). A change-of-state token and aspects of its sequential placement. In J. M. Atkinson, & J. Heritage (Eds.), *Structures of social action: Studies in conversation analysis* (pp. 299–345). Cambridge University Press.
Hu, S. M., Vongpumivitch, V., Chang, J. S., & Liou, H. C. (2014). The effects of L1 and L2 e-glosses on incidental vocabulary learning of junior high-school English students. *ReCALL, 26*(1), 80–99.
Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. Lerner (Ed.), *Conversation analysis, studies form first generation* (pp. 13–34). John Benjamins Publishing Company. https://doi.org/10.1075/pbns.125.02jef.
Kohler, F. S., & Thorne, S. L. (2011). The social life of self-directed talk: A sequential phenomenon? In J. K. Hall, J. Hellermann, & S. Pekarek Doehler (Eds.), *L2 interactional competence and development* (pp. 66–92). Multilingual Matters.
Koyama, T., & Takeuchi, O. (2004). Comparing electronic and printed dictionaries : How the difference affected EFL learning. *JACET Bulletin, 38*, 33–46.
Koyama, T., & Takeuchi, O. (2007). Does look-up frequency help reading comprehension of EFL learners? Two empirical studies of electronic dictionaries. *CALICO Journal, 25*(1), 110–125. https://doi.org/10.1558/cj.v25i1.110-125
Laffey, D. (2019). Comparing the effects of freely available online dictionaries and printed glosses on vocabulary acquisition. *English teaching, 74*(2), 27–49.
Laufer, B., & Hill, M. (2000). What lexical information do L2 learners select in a CALL dictionary and how does it affect word retention? *Language, Learning and Technology, 3*(2), 58–76.
Laufer, B., & Levitzky-Aviad, T. (2006). Examining the effectiveness of "bilingual dictionary plus" - a dictionary for production in a foreign language. *International Journal of Lexicography, 19*(2), 135–155. https://doi.org/10.1093/ijl/eck006
Lee, H., Warschauer, M., & Lee, J. H. (2017). The effects of concordance-based electronic glosses on L2 vocabulary learning. *Language, Learning and Technology, 21*(2), 32–51.
Licoppe, C., & Morel, J. (2012). Video-in-interaction:"Talking heads" and the multimodal organization of mobile and Skype video calls. *Research on Language and Social Interaction, 45*(4), 399–429.
van Lieshout, C., & Cardoso, W. (2022). Google Translate as a tool for self-directed language learning. *Language, Learning and Technology, 26*(1), 1–19. http://hdl.handle.net/10125/73460.
Lilley, W., & Hardman, J. (2017). You focus, I'm talking": A chat analysis of mobile dictionary use in an advanced EFL class. *Africa Education Review, 14*(1), 120–138. https://doi.org/10.1080/18146627.2016.1224592
Loucky, J. P. (2010). Comparing electronic dictionary functions and use. *CALICO Journal, 28*(1), 156–174. https://doi.org/10.1017/CBO9781107415324.004
McAlpine, J., & Myles, J. (2003). Capturing phraseology in an online dictionary for advanced users of English as a second language: A response to user needs. *System, 31*(1), 71–84.
Moalla, Asma, Abid, Nadia, & Balaman, Ufuk (2020). Task-enhanced virtual exchange between University of Sfax, Tunisia, and Hacettepe University, Turkey. In Francesca Helm, & Ana Beaven (Eds.), *Designing and implementing virtual exchange – a collection of case studies* (pp. 117–126). Research-publishing.net. https://doi.org/10.14705/rpnet.2020.45.1120.
Mondada, L. (2016). Challenges of multimodality: Language and the body in social interaction. *Journal of SocioLinguistics, 20*(3), 336–366.
Müller-Spitzer, C., & Koplening, A. (2014). Online dictionaries: Expectations and demands. In C. Müller-Spitzer (Ed.), *Using online dictionaries* (pp. 143–188). De Gruyter.
Musk, Nigel (2022). Using online translation tools in computer-assisted collaborative EFL writing. *Classroom Discourse*. https://doi.org/10.1080/19463014.2021.2025119
Nation, I. S. P. (1989). Dictionaries and language learning. In M. L. Tickoo (Ed.), *Learners' dictionaries: State of the art RELC anthology series No. 23* (pp. 65–71). Singapore: SEAMEO Regional Language Centre.
Nation, P. (2013). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
Nesi, H. (2013). Researching users and uses of dictionaries. In H. Jackson (Ed.), *The bloomsbury companion to lexicography* (pp. 62–74). https://doi.org/10.5040/9781472541871.ch-005. Bloomsbury.
Nist, S. L., & Olejnik, S. (1995). The role of context and dictionary definitions on varying levels of word knowledge. *Reading Research Quarterly, 30*(2), 172–193.
O'Dowd, R., & Lewis, T. (2016). *Online intercultural exchange policy, pedagogy, practice* (1st ed.). Routledge.
Park, I. (2010). Marking an impasse: The use of anyway as a sequence-closing device. *Journal of Pragmatics, 42*(12), 3283–3299.
Pekarek Doehler, S., & Berger, E. (2018). L2 interactional competence as increased ability for context-sensitive conduct: A longitudinal study of story-openings. *Applied Linguistics, 39*(4), 555–578.
Peters, E. (2007). Manipulating L2 learners' online dictionary use and its effect on L2 word retention. *Language, Learning and Technology, 11*(2), 36–58.
Pettitt, N. (2017). *Social positioning in refugee women's education: A linguistic ethnography of one English class*. the USA: Ph.D. dissertation, Georgia State University. https://scholarworks.gsu.edu/alesl_diss/42/.
Poole, R. (2012). Concordance-based glosses for academic vocabulary acquisition. *CALICO Journal, 29*(4), 679–693.
Rahman, R. A., Yee, B. C., & Kee, L. L. (2017). The use of e-pictionary in vocabulary instruction. *The English Teacher, 45*(3), 144–158.
Siegel, M. E. A. (2007). What do you do with a dictionary?: A study of undergraduate dictionary use. *Dictionaries: Journal of the Dictionary Society of North America, 28*(1), 23–47. https://doi.org/10.1353/dic.2007.0015
Skogmyr Marian, K., & Balaman, U. (2018). Second language interactional competence and its development: An overview of conversation analytic research on interactional change over time. *Language and Linguistics Compass, 12*(8), Article e12285. https://doi.org/10.1111/lnc3.12285
Türk, E., & Erçetin, G. (2014). Effects of interactive versus simultaneous display of multimedia glosses on L2 reading comprehension and incidental vocabulary learning. *Computer Assisted Language Learning, 27*(1), 1–25.
Wang, J. (2012). The use of e-dictionary to read e-text by intermediate and advanced learners of Chinese. *Computer Assisted Language Learning, 25*(5), 475–487. https://doi.org/10.1080/09588221.2011.631144
Yanguas, I. (2009). Multimedia glosses and their effect on L2 text comprehension and vocabulary learning. *Language, Learning and Technology, 13*(2), 48–67.
Yun, J. (2011). The effects of hypertext glosses on L2 vocabulary acquisition: A meta-analysis. *Computer Assisted Language Learning, 24*(1), 39–58.
Zheng, H., & Wang, X. (2016). The use of electronic dictionaries in EFL classroom. *Study in English Language Teaching, 4*(1), 144–156.