Computer Mediated Collaborative Word Search in Online Tutoring: A Single Case Analysis

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As internet-based remote communication became one of the primary modes for human interaction, particularly when it has been adopted in instructional and educational contexts, researchers have begun exploring various features of the interactions occurring on or mediated by these platforms. Garcia and Jacobs (1999) examined students' exchanges on a text-based quasi-synchronous discussion program and found that the turn-taking system differs greatly from naturally-occurring face-to-face interactions such as turn-allocation and projection. Computer-mediated collaboration is also another topic that has been extensively addressed (See for example Heath & Luff, 1992; Luff et al, 2003). It has been found that video-mediated interactional environment can impact participants' interactional conduct and introduce communicative asymmetries (Heath & Luff, 1992). This short paper analyzes one word-search episode between a teacher and a student during a web-based language tutoring session and demonstrates how the sequence is collaboratively conducted and resolved.

Data come from nine online tutoring sessions, each around one hour in length. Participants include one Italian teacher (T) and one student (S). The two participants met on a language tutoring website and have been holding one-hour tutoring sessions roughly twice a week. These sessions typically include a speaking component in which S recounts aspects of her recent experiences, as well as exercises on different linguistic skills. The website provides students the ability to search for available teachers and request lessons. Once a lesson is scheduled, a web-conferencing meeting link is automatically generated for that lesson and can be accessed by both participants. Based on the video-conferencing platform Google Hangout, the meeting offers functionalities including turning on one's web-cam, speaking over the microphone, sharing documents, and typing in a chat box. Recordings were made between March to May 2015 using a screen-capturing software from the student's computer.

Data have been transcribed primarily using the Jeffersonian conventions (Jefferson, 2004). English translation is provided in italics. Screenshots of the webpage and a photo of the student's notebook are included to illustrate what is visually available or consequential in the interaction. Analysis is conducted within the conversation analytic framework, which provides a unique advantage in explicating how participants make sense of each other in the moment-by-moment unfolding of interactions (Psathas, 1995).

The excerpt below is taken from a longer narrative from S on her involvement in a research project with a group of senior scholars. She has been reporting that, after submitting a proposal for a special issue in a journal, the group had recently received some negative feedback from the editorial board. As it is made clear that she has trouble with the vocabulary item "board," both T and S embark on a word search for the most fitting equivalent in Italian.

Excerpt: "editorial board" (DICT=online dictionary)
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01    T:          il feedback è stato: (.) così così,
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```
                          the feedback was so so
02    S:      perch- (0.5) dal uh- (0.5)
                          becau- from the uh-
03    T:      dall'editore?
                          from the editor?
04    S:      uh n- it's like {the [board?]
05    T:                         [no.  ]-((shakes head, leans forward))
06    S:      the boar- the editorial b[oard.-((rolling finger))}
07    T:                                 [ah-
08            ((looks to left, pinching lips)) mmm::,
09    S:      heh .↑hh
10    T:      °come si puoi dire° {board.-((leans in, types))}
                          how can one say 'board'?
11            ((lowers head, types, looks up))
12            .hhh non lo so.=aspetta:?
                          I don't know. Wait
13            ((typing)) no- (   ) che trovo-
                          no-       what I find-
14            ((typing, looks up, [mouse clicking))          ]
15    S:                          [((opens new tab in browser))]
16            ((goes to DICT)) [((types 'board' in search box))]=
                          FIG.1
```
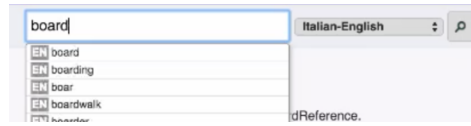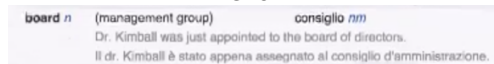


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17    T:                   [.hh come::- ppp-  pf:-          ]
                                  how-
18    S:      =((DICT shows search results))
                          FIG.2
```



```
19    T:      tsk perché no(h)n- non usiamo
                          because we don't use
20            [questa               ] paro[la:-] [comi ]tato.
                this word. 'committee'.
21    S:      [(scrolls down page)]]    [u:h-] [↑u:h-]     consiglio.=
                                                         'council'
                          FIG.3
```
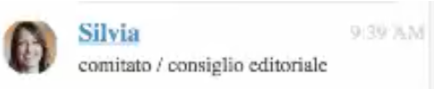


```
22    T:      =comitato.
                          'committee'
23    S:      ↑o commitato.=
                 or 'committee'
24    T:      =consiglio (>va) bene.<=o commitato anche,
                'concil' is OK. Or 'committee' too
25    S:      [u:m       ] commita[to di: wha- e- editore? no.]
                um committee of what- editor? no
26    T:      [((typing))]        [okay-((nodding, typing))   ]
27            ri↓ale,-((finishes typing))
              'riale'
28            ((chat box shows "comitato/consiglio editoriale"))
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```
                              FIG.4
```

Silvia   9:39 AM
comitato / consiglio editoriale

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29                    editoriale,=>usi[amo l'aggeti]vo.< [((nods))]
                      editorial. we use the adjective
30      S:                       [editori-   ]      [U:↑h.   ]
31                    ((lowers head, writes while reading))
32      T:            (    ) gruppo ma gruppo è troppo generale.
                      (    ) 'group' but 'group' is too general
33                    =generico. co[mitato].
                      generic. 'committee'
34      S:                       [okay, ] ((writes while reading))
                                       FIG.5
```
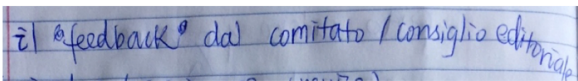
```
35                    u:m e- è: stata no: ma, ((continues telling))
                      u:m it was 'no' but…
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As S displays difficulty in uttering the missing noun phrase "dal- uh- (from the- uh-)" in line 2, T in line 3 supplies a grammatically fitted candidate answer "dall'editore? (from the editor?)" which is not taken up by S as she clarifies the lexical item she is really after "it's like the board?" (line 4) and "the editorial board" (line 5), while signaling a word search through rolling finger gestures. In line 10, T initiates self-talk delivered partially in quiet speech "°come si puoi dire° board. (how can one say board?)" and starts typing on her computer in line 11 while putting S on hold "aspetta:? (wait)" in line 12. Orienting to T's cues of initiating a word search, S embarks on her own search by simultaneously opening a new tab in the browser, typing in the address of an online dictionary, and then typing in "board" in the search box (lines 15-16, Fig. 1). In the meantime, T continues signaling temporary lack of success with a cut-off and a few vocalizations ".hh come::- (how) ppp- pf:-", as well as an account that "perché no(h)n- non usiamo questa parola:- (because we don't use this word in Italian)" delivered with a cut-off as the first word search candidate "comitato (committee)" surfaces in lines 17-20. S, on the other hand, has simultaneously scrolled down the page and located another candidate "u:h- ↑u:h- consiglio." (line 21; Fig. 3).

   T repeats "comitato" in line 22, which S adopts in line 23 as an alternative "↑o comitato (or committee)." T latches on and validates both candidate searches "consiglio >va bene.<=o comitato anche, (council is OK. Or committee, too.)" Then in line 25, S seems to be resuming the telling by first confirming with T the choice of words "u:m, comitato di: wha- e- editore? no. (um committee of what- editor? no.)". In the meantime, T in line 26 is typing while acknowledging S by nodding and saying "okay." As she finishes typing, she repairs S's "di editore" by highlighting the adjective suffix "ri↓ale" in line 27. At this point, the chat box shows what T has typed in "comitato / consiglio editoriale" which adopts both search candidates as well as the adjectival form of "editore" (line 28, Fig. 4). While T reiterates the complete adjective form "editoriale (editorial)" closely followed by "usiamo l'aggetivo (we use the adjective)," S partially repeats "editori-" before lowering her head and starting to take notes. T now provides another candidate "gruppo (group)" and accounts for its lack of fittedness "ma gruppo è troppo generale.=generico. (but group is too general. generic.)" S acknowledges and continues writing while reading the phrase (line 34, Fig. 5), and then resumes the telling afterwards.

   Consistent with Koshik and Seo's (2012) review of learner-initiated searches, this word search episode is initiated when one of the participants (S) signals difficulty in a lexical item,

which the other participant (T) takes up and joins in. The collaborative nature of this episode is further evidenced as T indicates temporary lack of access and S also joins in with the aids of an external online resource. As potentially fitting candidates are located by both participants, they are first validated by T verbally and then through the chat box, and later adopted in S's notebook.

There are two apparent limitations of this case study. Since data were recorded from one of the participants' desktop, the analysts have limited access to the relevant environmental features of both participants. For example, the spatial arrangement of the lesson page and the dictionary on T's desktop remains unknown, which poses challenges on the interpretation of T's gaze shifts. Also, since the interlocutor's video feed takes a larger space on one's desktop, relevant embodied actions of S, such as writing in a notebook, are not always visible. Despite the limitations, this analysis provides a detailed examination of an interaction occurring in a video-conferencing environment mediated by available online resources, and demonstrates how a word-search sequence is collaboratively conducted and resolved. Since online teaching as an instructional context has been gaining popularity, it is suggested that teachers examine the interactional features in such environments and take into consideration the technological affordances when designing lessons.

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