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# Learners' use of first language (Arabic) in pair work in an EFL class

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**Abstract**
One of the concerns foreign language teachers may have about using small group (and pair) work is that students will use their shared first language (L1) instead of the target language. This study investigated the effect of learner proficiency pairing and task type on the amount of L1 used by learners of English as a foreign language (EFL) in pair work and the functions that the L1 served. Learners in this study ($n$ = 15 pairs) formed three proficiency groupings based on the teacher's assessment of their second language proficiency: high–high (H–H), high–low (H–L), and low–low (L–L). All pairs completed three tasks – jigsaw, composition and text-editing – and their talk was audio-recorded. The transcribed pair talk was analysed for the quantity of L1 used (L1 words and L1 turns), and the functions the L1 served. The study found that overall, there was a modest use of L1 in pair work activity and that task type had a greater impact on the amount of L1 used than proficiency pairing. L1 was mainly used for the purpose of task management and to facilitate deliberations over vocabulary. When used for task management, L1 tended to reflect the kind of relationship the learners formed. When used for vocabulary deliberations, L1 was used not only to provide explanations to peers but also for private speech.

**Keywords**
L1, pair work, proficiency pairing, tasks

## I Introduction

The current communicative approaches to second language (L2) instruction encourage the use of small group work (including pair work) in the L2 classroom as a means of providing learners with more opportunities to use the L2. However, one of the concerns for language teachers about small group work is that learners may use their first language (L1) instead of their L2 in such activities. Learners' use of L1 may be particularly high in foreign language (FL) contexts where learners share the first language. For example, Guk and Kellogg (2007)

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reported a large proportion of L1 use in an FL context (Korea) in learner–learner interactions (46.93% of the total learner–learner utterances). Kang (2005) reported on learners' reluctance to speak in the L2 (English) in groups composed of fellow L1 (Korean) speakers. One participant commented about this 'unnatural' situation: 'I feel like I'm wearing a mask' (p. 284).

In the past, the dominant view towards the use of L1 in L2 classes was that it should be strongly discouraged, if not outright prohibited. Many scholars felt that the use of L1 would interfere in the development of the L2 (e.g. Odlin, 1989; Kellerman, 1995). Recent research (e.g. Orland-Barak & Yinon, 2005; Carless, 2008), however, has shown that teachers (novice and experienced teachers as well as teacher trainers) view the use of L1 in the L2 classroom more positively, seeing some use of the L1 as a constructive tool in teaching and class management. An interesting study by Brooks-Lewis (2009) showed that learners too may appreciate the use of their L1 in L2 classes. The study, motivated by the author's own negative experiences of learning an L2 in classes where the L1 was excluded, elicited learners' feedback on an English as a foreign language (EFL) course (designed by the author), which included extensive use of the L1 and a gradual increase in the amount of L2 used. The study found that the learners were overwhelmingly supportive of the extensive use of L1 in classroom activities. The learners felt that the inclusion of the L1 made learning the new language easier, as it enabled them to compare the new language knowledge with their existing knowledge of their L1. More importantly, they felt that the use of the L1 acknowledged the value of their prior knowledge.

However, although learners may hold positive attitudes towards the use of L1 by their teachers, studies that investigated learners' use of their L1 in pair activities have found that learners use the L1 sparingly (e.g. Swain & Lapkin, 2000; Storch & Wigglesworth, 2003). These studies also show that, when used, the L1 serves a number of important functions that can facilitate task completion and language learning.

## II Functions served by L1 in L2 activities

Among the first studies to consider the use of L1 from a more positive perspective were those by Villamil and de Guerrero (1996) and Anton and DiCamilla (1998). Villamil and de Guerrero (1996) examined the dialogue of 54 students learning English as a foreign language (EFL) as they engaged in revising each other's writings. The researchers reported that the use of the L1 enabled the learners to complete the task more effectively (e.g. gain a clearer understanding of the text and offer suggestions on how to improve the text), to maintain dialogue, and to externalize their thoughts. Anton and DiCamilla (1998) investigated the talk of five pairs of English L1 learners of Spanish engaged in a writing task and found similar uses of the L1. Based on their data, the authors established a list of categories for L1 use; categories which have since been used by a number of other researchers. These categories included:

- providing each other with assistance, shown in negotiating metalinguistic knowledge and evaluating and understanding the meaning of the text;
- initiating and maintaining interrelationships, where learners established goals and built up shared perspectives to achieve such goals; and
- externalizing or vocalizing their thoughts.

A small number of studies subsequently sought to investigate whether factors such as task type or target language affect the functions that L1 serves. For example, Swain and Lapkin's study (2000), which was conducted in eighth-grade French immersion classes, investigated the effect of task type on L1 use. One group ($n$ = 12 pairs) completed a dictogloss task, and the other ($n$ = 10 pairs) a jigsaw task. Results showed that less than 30% of total turns were in L1, but there were no statistically significant differences in the amount of L1 used across the two tasks. The researchers did note, however, considerable variations in L1 use amongst pairs of students. The L1 was found to perform three functions, similar to the functions found by Anton and DiCamilla (1998), with slight variations reflecting the nature of the tasks used. For example, the first function, entitled 'moving the task along', included sequencing of the pictures in the jigsaw task and task management. The second function, entitled 'focusing attention', included instances where learners used the L1 to negotiate L2 vocabulary and grammar. The third function was to enhance the learners' interpersonal relations including off-task talk and managing disagreements. The most frequent function of L1 on both tasks was found to be task management. The participants' L2 proficiency was assessed post hoc from scores they received on their completed tasks for language and content. The researchers found that weaker pairs used more L1 on the jigsaw task than more proficient pairs. However, the pairs' L2 proficiency did not seem to have an effect on the amount of L1 used on the dictogloss task.

Another study that investigated the impact of task on L1 use was by Storch and Wigglesworth (2003). This study, conducted in a second language context, investigated the use of L1 by six pairs of ESL learners – three Indonesian and three Chinese – on two different tasks (text reconstruction and joint composition). The study found that the task type had an impact on the functions served by the L1. In the joint composition task, the L1 was used mostly for the purpose of task management and clarification, whereas in the reconstruction task the L1 was often used for vocabulary and meaning discussions. Interviews conducted with the learners revealed that the students were generally reluctant to use the L1 but thought that it could be helpful, chiefly in activities where meaning is central (i.e. the composition). Furthermore, the findings showed that the amount of L1 used by the pairs varied, with the majority of the pairs (four) using it minimally and only two pairs using it extensively.

Thoms et al. (2005) investigated whether the target language has an effect on the functions for which the L1 is used. The researchers investigated the use of L1 among English speakers learning three foreign languages (14 learning Chinese, 14 learning Spanish and 10 learning German) while performing dyadic synchronous chats on a jigsaw task. The authors found that the target language had no effect on the function for which the L1 was used. They reported that across the three L2 classes, learners used their L1 to serve a range of functions similar to those reported in Swain and Lapkin's (2000) study, but that moving the task along was the most frequent function served by the L1, regardless of the target L2.

## III Sociocultural theory: The role of language

Research on the functions of L1 has been largely informed by Vygotsky's (1981, 1986) sociocultural theory (SCT). SCT views cognitive development; that is, the transformation of elementary mental processes into higher order ones (e.g. planning) as essentially

social. Learning and development originate in social interactions between humans; between a novice and a more knowledgeable member of the community. Language, one of the most important (but by no means only) cultural artifacts, plays a key role in human cognitive development. Language mediates not only our relationship with others but also our own mental activity (Lantolf & Thorne, 2006).

In social interaction, language enables the expert to focus the novice's attention, to explain the requirements of an activity, and to offer assistance that is finely tuned to the novice's needs. These functions are referred to in the literature as scaffolding. Studies on group and pair work, particularly in adult L2 learning contexts (e.g. Ohta, 2001; Storch, 2002), have shown that scaffolding can be collective (Donato, 1994); that is, shared or co-constructed by members of the group.

Language can also mediate our own mental activity via private speech. Private speech is speech directed to oneself. It may be fully externalized (i.e. vocalized) and therefore audible to an observer, but it may also be whispered or even subvocal, and as such only audible to the speaker (Lantolf & Thorne, 2006). Thus, collecting examples of private speech is quite difficult. A small number of studies that have investigated private speech used by L2 learners in classroom and experimental settings (e.g. Ohta, 2001; Centeno-Cortés & Jiménez-Jiménez, 2004) have shown that private speech enables adult L2 learners to direct their attention to a particular aspect of a task, to deliberate and evaluate their ideas.

To summarize, studies to date, informed by SCT, seem to indicate that learners, when assigned to work in small groups or pairs, tend to use their L1 judiciously, and for a range of functions deemed helpful for language learning. Findings about the effect of task on the amount of L1 use seem to be inconclusive, and there are indications that the learners' L2 proficiency may have an impact on L1 use. However, we note that many of the studies on L1 have been conducted in Western countries, where pair work is often used in L2 classes. Thus, in our study we set out to investigate the amount and functions of L1 use in an FL class (English) in a college in Saudi Arabia where pair work is rarely used. Furthermore, the study sought to investigate what effect, if any, the L2 proficiency of the members of the pair and the task type have on L1 use (both quantity and functions).

## IV The study

### *1 Setting*

The study, part of a larger research project on the nature of pair work, was conducted at a college in Riyadh, Saudi Arabia. All students (and staff) at the college are males. Although all students, prior to entering college, complete six years of high school English, English is a compulsory subject for all first year students at the college. However, English classes are not streamed for major or L2 proficiency. Thus students from computer science, where most of the instruction is in English, and students majoring in Arabic language, where no English is used for instruction, can be found in the same class. Thus English classes in the college (as is the case in some other colleges and universities in Saudi Arabia and the Gulf States; see Syed, 2003) tend to be quite heterogeneous in terms of the learners' L2 proficiency.

**Table 1** Participants

| H–H group | H–L group | LH–L group |
|---|---|---|
| Said & Masr | Musa & Aziz | Ali & Naser |
| Sami & Mustafa | Omar & Thabit | Salim & Anees |
| Amir & Mohamed | Talal & Saber | Naif & Nabeel |
| Basim & Basri | Gamal & Sahafi | Fahad & Salam |
| Bareq & Kalid | Rashed & Karim | Hathal & Obaid |

The L2 teaching approach in this college, typical of many English classes in Saudi Arabia, is quite traditional. Classes tend to be quite large and very much teacher-fronted. There is a heavy reliance on the use of a set textbook, and the focus of the class activities and the homework is on grammar and reading comprehension.

## 2 Participants

Students from two parallel English (EFL) classes who were completing the second semester of their first year at the college and who were taught by the same (male) teacher were invited to participate in the study. The invitation and explanations about the study were provided in Arabic (L1) by one of the researchers. The students were informed that the study aimed to investigate learners' task performance on a range of tasks.

Out of a total of about 60 students, 36 participated in this study. The participants were paired according to their English (L2) language proficiency level as determined by their classroom teacher. The criteria used by the teacher to gauge the students' L2 proficiency were: the students high school English scores (which ranged from 63%–95%), their scores on two grammar quizzes completed in class earlier in the semester, as well as his general observations made over the semester. These 36 students formed three groups in terms of proficiency pairing: six pairs of relatively high proficiency students paired with students of the same proficiency (H–H), six pairs of higher proficiency students paired with students of a relatively lower proficiency (H–L), and six pairs of lower proficiency students paired with students of similar proficiency (L–L).[1] However, because some data were incomplete,[2] only five pairs from each proficiency group were subsequently used in the study. The three groups are presented in Table 1 (all names are pseudonyms). The first name in the H–L cohort is the student who was considered of higher L2 proficiency in that pair.

## 3 Tasks

Three tasks were used in the study: jigsaw, composition, and text-editing. The tasks differed in terms of their focus and familiarity. The jigsaw and composition are meaning-focused tasks, whereas the text-editing focuses explicitly on grammatical accuracy and expression. The composition and editing tasks were familiar to students in this context, although they were typically completed individually rather than in pairs. The jigsaw task was new to the students.

## 4 Data collection

The participants completed the three tasks in their assigned pairs over a three-week period. Each week, the last half hour of class time was used for data collection (those who did not participate in the study were allowed to leave early). Data were collected in two adjacent classrooms to minimize the effects of noise interference. The researcher who collected the data took brief observation notes (e.g. on who was the scribe). All pair talk was audio-recorded.

In week 1, the participants completed the jigsaw task. Each participant was given a set of four pictures (see Appendix 1). The learners had to arrange their pictures (eight in total) in a sequence and then write the story depicted in the entire set of pictures. In week 2, they were given a choice of two topics (one related to health and the other to the Saudi economy) and were required to write a joint composition of three to four paragraphs in length (see Appendix 2). In the third week, the pairs completed a text-editing task. Each pair was given a text produced by another pair in the joint composition task (with the names removed). They were asked to edit the text for grammatical accuracy and expression (see an example of such a text in Appendix 3). The time given to complete each of the tasks was 20 minutes, with slightly longer (25 minutes) for the jigsaw task given its lack of familiarity. Furthermore, a pilot study, completed prior to the main study, revealed that students required additional time to complete this task.

## 5 Data analysis

The data used in this study were the recorded and transcribed pair talk. Data analysis was guided by the following research questions:

- How much L1 was used by the learners?
  - What impact, if any, did L2 proficiency pairing have on the amount of L1 use?
  - What impact, if any, did task type have on the amount of L1 use?
- What functions did the L1 serve in the learners' interaction?
  - What impact, if any, did L2 proficiency pairing have on the functions the L1 served?
  - What impact, if any, did task type have on the functions the L1 served?

Choosing a unit of analysis, particularly to analyse L2 learners' oral interaction, is problematic (see comprehensive discussion in Foster et al., 2000). Perhaps what should guide the researcher in this choice is the purpose of the analysis. Many of the units of analysis (e.g. T-units, C-Units, AS-units) were developed in order to measure development in speech (of native speakers) or in proficiency (of non-native speakers). Syntactic units, such as T-units (Hunt, 1966) and AS-units (Foster et al., 2000) offer suitable measures because they enable the researcher to compute grammatical accuracy and complexity. Because the focus is generally on syntactic units, analysis of learner talk using T-units or AS-units ignores turns consisting of simple single words, echoic repetitions or self-repairs. However, since the aim of our study was to investigate the

amount of L1 used and the functions that it served, we felt that it was important to include all turns, regardless of length or type. Words and turns were therefore chosen as units of analysis. Word counts were used to measure the amount of L1 produced, and turns for the functions that the L1 served. Using words and turns as units of analysis had two further advantages. Words and turns are easy to identify, and this means high coding reliability. Furthermore turns have been used by other researchers working with similar types of data (e.g. Swain & Lapkin, 2000), and this in turn allowed for comparability of findings.

Word count of L1 in this study involved subtracting the number of L2 (English) words from the total number of words (L1 + L2), using the computer word-count function. However, such a measure is likely to underestimate L1 use, since in Arabic some of the most frequently used morphosyntactical units such as articles, prepositions, and pronouns are often attached to nouns or verbs as prefixes or suffixes. Furthermore, word counts do not reflect the distribution of word use. Hence, another measure used to quantify L1 use was a count of turns that contained L1 words.

All turns containing L1 were identified and coded. The analysis distinguished between two types of L1 turns: total or predominant L1 turns (total/predominant) and minor L1 turns. Total/predominant L1 turns were those that contained an equal number or more L1 than L2 words. Minor L1 turns were those that contained fewer L1 than L2 words. Admittedly turn count is also an inexact measure, since turns could vary in length. However, it was felt that using both word and turn counts could provide a better indication of the amount of L1 used by the learners than just a single measure.

To address the second research question all L1 turns (regardless of type) were coded for the function they seemed to serve. Based on the available research on L1 use, we started with a working list of possible functions the L1 may serve. Then, through a close and iterative examination of the data, we refined the list to finally arrive at a list of five functions that could best capture our data:

1. Task management: where L1 was used in the turn to clarify instructions, recruit attention, comment on the quality of the work produced, choose the topic (composition), negotiate the sequence of the pictures (in the jigsaw task), and negotiate or direct the writing activity. It also included any turns that simply contained a phatic expression (e.g. Tayeb, meaning 'ok').
2. Discussing and generating ideas: where L1 was used to generate or comment on ideas generated, particularly in the composition task.
3. Grammar deliberations: where the L1 was used to discuss morphosyntax and text structure.
4. Vocabulary deliberations: where L1 was used in deliberations over word/sentence meaning, word searches, and word choice.
5. Mechanics deliberations: where L1 was used to discuss punctuation, spelling and pronunciation.

The following excerpts from the data exemplify how the L1 use was coded for the type of L1 turns and their functions. In Excerpt 1 the learners discuss the jigsaw pictures before they commence writing the story. Turn 20 was coded as a minor L1 turn, and turns

22 and 24 as total/predominant L1 turns. All three were coded as serving the function of task management. In turn 20 and 22 the L1 was used to describe and sequence the pictures. In turn 24, the L1 was used for another task management function: to recruit attention or invite participation.

Excerpt 1:[3]

20 Bareq: maybe maybe I think this first. ***Shakl*** {*it looks*} the doctor check patient and write medicine.
21 Kalid: after that he go to the pharmacy.
22 Bareq: ***bas atwaqaA en hathi awal sourah*** {*but I think this is the first picture*}. ***Yakteb leh alwasfah*** {*writing the prescription*}.
23 Kalid: aha
24 Bareq: ***walla la***? {*don't you think?*}
[Bareq & Kalid, jigsaw]

Excerpt 2 comes from two learners completing the composition task. Turn 39 was coded as a total/predominant L1 turn and turn 40 as a minor L1 turn. Both dealt with vocabulary. In turn 39 Karim supplied the meaning of the word drugs in Arabic in response to Rashed's question (turn 38). In turn 40, Rashed stated that he knew the meaning of the word drugs and repeated the L1 equivalent (he then proceeded to explain the intent of his original question in L2).

Excerpt 2:

37 Karim: and drugs
38 Rashed: I haven't any any subject from drugs any way … drugs … what's the mean drugs?
39 Karim: ***mukhadrat*** {*drugs*}
40 Rashed: I know drugs ***mukhadrat*** but what's the drugs? But what's the drugs? … you take drugs before?
[Rashed & Karim, composition]

There were a few instances (18 turns altogether) where the L1 used in the turn served more than one function. To avoid double-counting, such turns were counted for the predominant function they served. Preceding and subsequent turns formed the basis for coding decisions. In instances that were ambiguous, the number of L1 words used for each function was also taken into consideration. For example, in Excerpt 3, the L1 in turn 259 was used in deliberations about mechanics (orthography) and grammar (plurality) of a word.

Excerpt 3:

259 Fahad: ***saheeh esplling hagha*** {*its spelling is correct*}. ***Bes alla nhtha jumalh yanii ashkhas*** {*but we need to make it in the plural form*}.
260 Salam: ok persons …
[Fahad & Salam, text editing]

**Table 2** Number and percentage of L1 words according to proficiency grouping

| | Total words (L1 + L2) | | | L1 words | | | L1 total words | | |
|---|---|---|---|---|---|---|---|---|---|
| | *n* | Minimum | Maximum | *n* | Minimum | Maximum | Percent | Minimum | Maximum |
| H–H | 8520 | 1153 | 2329 | 447 | 9 | 222 | 5 | 0 | 17 |
| H–L | 8429 | 979 | 2700 | 437 | 5 | 292 | 5 | 0 | 19 |
| L–L | 7736 | 712 | 2473 | 938 | 9 | 739 | 12 | 0 | 30 |
| Total | 24685 | | | 1822 | | | 7 | | |

In this excerpt, the L1 turn (turn 259) was coded as deliberating about grammar. In this coding decision we took into account the preceding and subsequent turns. In this instance, the preceding six turns (some of which also contained L1) dealt with the spelling of the word 'person'. In turn 259, Fahad reiterated in L1 that the word is spelled correctly and then shifted the focus to the form of the word. In the subsequent turn (turn 260), the focus on the word form continued. The coding of turn 259 as serving the function of deliberating about grammar was further reinforced when we compared the number of L1 words in each of the two functions of L1 in turn 259.

Another researcher, a fluent speaker of Arabic and English, coded six transcripts to check for inter-rater reliability of coding for the functions that L1 turns served. There was an 85% agreement between the raters. The main source of disagreements was in the distinctions between some of the subcategories of task management and the function of discussing and generating ideas, as they sometimes appeared to overlap. Discussion between the two coders led to a principled decision that in coding for functions of L1, the important consideration was whether the pair was trying to manage the task or produce new ideas.

## V Findings

The findings are presented first for the amount of L1 use (in words and turns) followed by the functions the L1 served. We then discuss some salient aspects of L1 use observed in these data.

### *1 L1 words*

Table 2 presents the number of L1 words found in each proficiency grouping in total, as well as minimum and maximum quantities. The percentage that L1 words formed out of the total number of words produced (L1 + L2) is shown in the final column.

The table shows that the amount of L1 words used by the pairs in total was fairly modest (7%). From the table it appears that the pairs in the L–L group used more L1 words (12%) than pairs in the other two groups (5%). However, the maximum and minimum figures for total words and L1 words produced illustrate the great variability between the pairs within each proficiency grouping.

**Table 3** Number and percentage of L1 words per task and proficiency grouping

| | Jigsaw | | | Composition | | | Editing | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total words | L1 words | Percentage of L1 words | Total Words | L1 words | Percentage of L1 words | Total Words | L1 words | Percentage of L1 words |
| H–H | 3789 | 74 | 2 | 2902 | 207 | 7 | 1829 | 166 | 9 |
| H–L | 3034 | 77 | 3 | 2980 | 83 | 3 | 2415 | 277 | 11 |
| L–L | 2611 | 165 | 6 | 2791 | 94 | 3 | 2334 | 679 | 29 |
| Total | 9434 | 316 | 3 | 8673 | 384 | 4 | 6578 | 1122 | 17 |

**Table 4** Frequency and type of L1 turns

| | Turns (L1 + L2) (*n*) | L1 turns: frequency | | L1 turns: type | | | |
|---|---|---|---|---|---|---|---|
| | | | | Total/predominant L1 turns | | Minor L1 turns | |
| | | *n* | Percentage of all turns | *n* | Percentage of L1 turns | *n* | Percentage of L1 turns |
| H–H | 1423 | 161 | 11 | 91 | 57 | 70 | 43 |
| H–L | 1073 | 208 | 19 | 108 | 52 | 100 | 48 |
| L–L | 1420 | 273 | 19 | 190 | 70 | 83 | 30 |
| Total | 3916 | 642 | 16 | 390 | 61 | 253 | 39 |

Table 3 presents data for L1 words in terms of tasks and proficiency grouping. The table shows that the editing task elicited the largest quantity of L1 words (17% of total words) overall and across the three proficiency groupings. Furthermore, the figures show that the L–L pairs produced more L1 words but only when working on the editing task (29%). On the other two tasks, there were no discernible differences between the three proficiency groupings. Thus a task effect was apparent only for the editing task, and the effect was more pronounced for the L–L pairs.

## *2 L1 turns*

Table 4 presents findings for L1 turns, distinguishing between total/predominant L1 turns and minor L1 turns and across the three proficiency groupings. The table shows that of the total number of turns 16% contained some L1 words. The majority of L1 turns (61%) were total/predominant L1 turns. The percentage of L1 turns in the H–L and L–L groupings was similar (19%) and higher than in the H–H group (11%). However, whereas in the H–L pairs half the L1 turns were total/predominant L1 (52%), in the L–L pairs a large proportion of the L1 turns (70%) were totally or predominantly in the L1. A closer investigation of the distribution of L1 use among dyad members showed that there was only one H–H and one L–L pair, where one member of the pair used more L1 than the

**Table 5** Number of L1 turns according to task type and proficiency grouping

| | Jigsaw | | | Composition | | | Editing | | |
|---|---|---|---|---|---|---|---|---|---|
| | L1 turns | Total/ predominant L1 turns | Minor L1 turns | L1 turns | Total/ predominant L1 turns | Minor L1 | L1 turns | Total/ predominant L1 turns | Minor L1 turns |
| H–H | 29 | 11 | 18 | 69 | 43 | 27 | 63 | 38 | 25 |
| H–L | 48 | 14 | 34 | 48 | 24 | 24 | 112 | 70 | 42 |
| L–L | 47 | 25 | 22 | 46 | 23 | 23 | 180 | 142 | 38 |
| Total | 124 | 50 | 74 | 163 | 90 | 74 | 355 | 250 | 105 |
| Percentage of L1 turns | | 40 | 60 | | 55 | 45 | | 70 | 30 |

other member (at a ratio greater than 2:1) on all three tasks. In the H–L pairs, the higher and lower proficiency learners used the L1 almost equally. Thus proficiency differences within the H–L pairs did not seem to affect the amount of L1 use.

Table 5 shows the distribution of L1 turns according to task type and proficiency groupings. Clearly the text-editing task elicited the greatest number of L1 turns (355). Furthermore, most of these L1 turns were totally or predominantly in the L1 (70%). In comparison, the other tasks elicited far fewer L1 turns (well below 200), and they tended to be more equally distributed between total/predominant L1 turns and minor L1 turns. For the L–L pairs, the text-editing task elicited a noticeably greater number of L1 turns than the other two tasks.

Taking the two measures of L1 into consideration (word and turn counts), a clear distinction could be drawn between low, moderate, and extensive L1 users. Low L1 users used very few L1 words (less than 5% of total words), and thus few of their turns (less than 10%) were in L1. Furthermore, over half of these L1 turns tended to be minor L1 turns, where the L1 was used for phatics (e.g. *tayeb* = 'ok'), discourse markers (e.g. *YaAni* … = 'I mean …'), and to express agreement and disagreement (e.g. *eah* = 'yes'). For moderate L1 users, L1 words accounted for between 5% and 10% of total words, and L1 turns accounted for about 20% of total turns. About half of these L1 turns were predominantly or fully in the L1. In contrast, for extensive L1 users, L1 words accounted for well over 15% of total words (between 17% and 30%). Over 25% of their turns were in L1, and most of these (well over 50%) were totally or predominantly L1 turns. Table 6 shows the number of pairs in each proficiency grouping coded according to L1 use.

It was interesting to note that across the three proficiency groupings, pairs who were found to be low L1 users used little L1 regardless of task type. In contrast, those that were moderate or extensive L1 users tended to use more L1 in the editing task than in the other two tasks. For example, Omar and Thabit (H–L pair) were categorized as moderate L1 users (8% of L1 words in their data). When working on the jigsaw and composition tasks, L1 words constituted 4% and 6% respectively of their pair talk. However, when working on the editing task, 23% of their total words were in L1 (and 34% of their turns).

**Table 6** Categorization of pairs as L1 users (number of pairs)

| | Low L1 users | Moderate L1 users | Extensive L1 users |
|---|---|---|---|
| H–H | 3 | 1 | 1 |
| H–L | 3 | 1 | 1 |
| L–L | 2 | 2 | 1 |

**Table 7** Number and percentage of L1 functions according to proficiency groupings

| | Task management | | Generating ideas | | Grammar | | Vocabulary | | Mechanics | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *n* | Percentage | *n* | Percentage | *n* | Percentage | *n* | Percentage | *n* | Percentage | |
| H–H | 55 | 34 | 40 | 25 | 6 | 4 | 52 | 32 | 9 | 5 | 162 |
| H–L | 129 | 62 | 13 | 6 | 11 | 5 | 43 | 21 | 13 | 6 | 208 |
| L–L | 106 | 39 | 22 | 8 | 37 | 14 | 75 | 27 | 33 | 12 | 273 |
| Total | 290 | 45 | 75 | 12 | 53 | 8 | 170 | 26 | 55 | 8 | 643 |

## 3 *Functions of the L1*

Table 7 shows the distribution of the functions the L1 served according to L2 proficiency groupings. The table shows the number of turns and the percentage these turns represent out of the total number of L1 turns for this group (shown in the final column). The final row shows the total number of L1 turns serving each of the major functions and what percentage they represent out of all L1 turns.

The table shows that the main function of L1 was task management (45% of all L1 turns), followed by deliberations over vocabulary (26% of all L1 turns). The table also shows that although the use of L1 for task management was found in all three proficiency groupings, it was the main function of L1 in the H–L group (used in 62% of all L1 turns). In contrast, the use of L1 in deliberations over vocabulary occurred mainly in the H–H (32% of L1 turns) and L–L dyads (27% of all L1 turns). In the L–L dyads, L1 was used for a broader range of functions. It was used not only for task management and deliberations over vocabulary, but also in negotiating over grammar (14% of L1 turns) and mechanics (12% of L1 turns), particularly spelling and punctuation. Unlike the other proficiency groupings, L1 was also used fairly extensively in the H–H cohort for generating and discussing ideas (25% of all L1 turns).

Table 8 shows the distribution of L1 turns according to tasks. It shows that L1 was used for task management to a large extent on all three tasks, but particularly so on the jigsaw task (70% of L1 turns) followed by the editing task (46% of L1 turns). L1 was also used to deliberate about vocabulary on all three tasks, but there was little use of L1 in deliberations about other aspects of language (i.e. grammar and mechanics). It was mainly when working on the composition task that learners used their L1 to generate and deliberate about ideas (36% of L1 turns).

**Table 8** Number and percentage of L1 functions according to tasks

| | Task management | | Generating ideas | | Grammar | | Vocabulary | | Mechanics | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *n* | Percentage | *n* | Percentage | *n* | Percentage | *n* | Percentage | *n* | Percentage | |
| Jigsaw | 87 | 70 | 1 | 0 | 4 | 3 | 23 | 19 | 9 | 7 | 124 |
| Composition | 40 | 24 | 59 | 36 | 3 | 2 | 55 | 34 | 7 | 4 | 164 |
| Editing | 163 | 46 | 16 | 5 | 46 | 13 | 91 | 26 | 39 | 11 | 355 |

## 4 Qualitative differences in L1 functions

There were some notable qualitative differences in the most frequent functions that L1 served, namely task management and vocabulary deliberations. When used for task management, one of the main purposes of L1 was to direct the writing activity. As such, it often reflected the relationship the pairs formed (Storch, 2002). In collaborative pairs – where both members contributed equally to the tasks and engaged with each other's suggestion – the L1 was often used to negotiate the writing activity and the role of the scribe. Such relationships were found only in proficiency equal pairs (H–H and L–L). In pairs demonstrating a dominant/passive relationship, one learner took or was afforded control of the task. This 'dominant' learner used the L1 to direct the writing activity. Dominant/passive relationships were found only in unequal proficiency (H–L) pairs. The following excerpts illustrate how the use of the L1 reflected these two types of relationships.

Excerpts 4 and 5 come from the data of Fahad and Salam, an L–L pair who seemed to form a collaborative relationship. Excerpt 4 comes from the pair when they worked on the jigsaw task. As the excerpt shows, Fahad offered to be the scribe, but required assistance with sequencing the pictures. The offer and the assistance subsequently provided by Salam were expressed in the L1.

Excerpt 4:

31 Fahad: ***khal abakteb*** {*I'll write down*} picture number one … ***wesh nakteb*** {*what do we write*} … where picture number one?
32 Salam: ***hathi*** {*this is*} picture number one
[Fahad & Salam, jigsaw]

This collaborative effort continued in the editing task. As shown in Excerpt 5, in turns 14–15, Fahad again offered to do the writing, an offer accepted by Salam. Then, throughout the task, as in the jigsaw task, both learners negotiated the task requirements in L1 (e.g. turns 88, 92, 160–161).

Excerpt 5:

14 Fahad: ok ***alheen awal matekteb***, {*now once you start writing*} … ***tabgani akteb wella takten ent*** {*you want me to write or you want to write*?}

15 Salam: ***ala rahtek*** {*as you wish*}. ***Sajel*** {*write*} there are
[…]
88 Fahad: ***nakten eljumlah kellah ba'deen?*** {*should we write the whole sentence then … ?*}
89 Salam: ***eah ekteb eljumal*** {*yes write down the sentence*}.
90 Fahad: but
91 Salam: ***ho ygool eedo ketabtah*** {he said re-write it down}.
92 Fahad: ***ne'eed aliah kel kel tha*** … ***enduhm akta' kamlah*** {*should we go over it all? They have sentences that are all wrong*}.
[…]
160 Fahad: ***kwayes*** {*good*} … leesh aktubha tayeb … ma yehtaj {*why should we write it then ... no need*}.
161 Salam: ***lazem tektebha … ent t'eed elqet'ah*** {*you have to rewrite the text*}.
[Fahad & Salam, editing]

In contrast, in the case of Musa and Aziz, an H–L pair, Aziz was the scribe on all three tasks. Excerpt 6 presents a fairly typical exchange between these learners. It illustrates the dominant/passive relationship established between the two, where Musa ordered Aziz what to do (e.g. turns 13, 71 and 117) and Aziz constantly deferred to Musa's authority or asked for directions (e.g. turns 74, 106, 110 and 112) and merely followed them (e.g. turns 14, 16 and 76).

Excerpt 6:

13 Musa: ***emsah*** … ***emsah hathi*** {*erase ... erase this*} ***ekteb hena for … ekte etasheeh*** {*write down the correct word*} for
14 Aziz: ***tayeb*** {*ok*}
15 Musa: For … ok?
16 Aziz: ok
[…]
71 Musa: big ***emsha … hut*** good {*erase big and put* good}.
72 Aziz: ***hum katbeen*** {*they wrote*} big **…** big ***hateenha ketha***?{*like this?*}
73 Musa: big health … big the health
74 Aziz: ***wesh tseer***? {*what does it become*?}
75 Musa: good
76 Aziz: good
[…]
105 Musa: health is good … good health … ***emsah hena*** {*erase here*} good health.
106 Aziz: ***elli hi sater kam***? {*which line*?}
107 Musa: ***sab'ah*** {*seven*}
108 Aziz: ***sab'ah*** {*seven*}
109 Musa: ***sab'ah*** {*seven*}
110 Aziz: ***wesh ngool feeh***? {*what should we say about it*?}
111 Musa: ***hena katbeen*** {*they wrote*} health is good … good health.
112 Aziz: ***wean hi?*** {*where is it*}?

113 Musa: good health … ***eah*** {*yeah*}.
114 Aziz: ***khan nakteb*** {*we write*} health.
115 Musa: ***ekteb*** {*write down*} health is good
116 Aziz: is good
117 Musa: ***ekteb tasheehah*** {*write down its correction*} … good health, you must … ***eah eah madbood*** {*yes yes ... got it*} … ***hathi ekteb*** {*for this write*}
[Musa & Aziz, editing]

The L1 was used frequently in deliberations over vocabulary in the data of all three proficiency groups. It was used to provide explanations and definitions of L2 words and assist in word searches. Excerpt 7 comes from the data of an L–L pair, showing that even low proficiency learners could pool their limited vocabulary knowledge and offer assistance to each other:

Excerpt 7:

61 Nabeel: any exercising … exercising …
62 Naif: ***leesh*** {*what you mean*} exercising? …
63 Nabeel: <whisper> ***tamareen*** {*exercise*}
64 Naif: exercise ***tamareen***?
65 Nabeel: yeah
[Naif & Nabeel, composition]

In the next example (Excerpt 8) from the data of Rashed & Karim, an H–L pair, it is Karim, the learner classified as of relatively lower L2 proficiency in this H–L pair, who provided the assistance.

Excerpt 8:

81 Karim: umm ok aaa it make a cancer
82 Rashed: Cancer?
83 Karim: cancer ***satan*** {*cancer*}.
[Rashed & Karim, composition]

The next excerpt (Excerpt 9) comes from Bareq and Kalid, an H–H pair. As shown in this excerpt, Kalid sought the meaning of the word nuclear and Bareq provided (turn 92) the L1 explanation, linking nuclear to factories and radiation. Kalid then asked for the meaning of the word 'plant' (turn 95), after which he was able to produce the words 'nuclear' and 'factory' himself (turn 97). It seems that the assistance provided by Bareq enabled Kalid to learn new L2 vocabulary.

Excerpt 9:

87 Kalid: radiation from
88 Bareq: nuclear plant from the nuclear

89 Kalid: From what?
90 Bareq: nuclear
91 Kalid: what does
92 Bareq: nuclear ***masaneA shesman this asmah alamsaneA annwaweya*** {*nuclear factories*} ***esha'at*** {*radiation*}
93 Kalid: radiation ***esha'at*** {*radiation*} from aaa
94 Bareq: nuclear plant yeah
95 Kalid: plant? What does plant?
96 Bareq: ***masna'*** {factory}.
97 Kalid: ***Masna'*** {factory} factory … nuclear factory.
[Bareq & Kalid, composition]

An interesting phenomenon, evident in the above excerpt and in the data of pairs across the three proficiency groupings, was the use of L1 as a means of self-confirmation. In the above excerpt, Kalid in turns 93 and 97 repeated the L1 words immediately before or after producing their equivalent in L2. This did not occur in response to a request, but as speech directed to oneself (private speech).

Another example of such private speech is provided in Excerpt 10 which comes from the data of Musa and Aziz, an H–L pair on the editing task. Aziz read the text provided and translated to himself the meaning of the L2 word 'health' by verbalizing its equivalent in L1 (turn 104). Such instances seemed particularly frequent in the pair talk on the editing task – the learners' way of explaining the meaning of the written text to themselves, before being able to edit it.

Excerpt 10:

104 Aziz: health … ***asseha*** {*health*} … good
105 Musa: health is good … good health …
[Musa & Aziz, editing]

## VI Discussion

The study set out to investigate in the first instance the amount of L1 used by learners working in pairs in this EFL context, where pair work is rarely used. The study found, as was found by studies in other L2 learning contexts (e.g. Swain & Lapkin, 2000; Storch & Wigglesworth, 2003), that these EFL learners used their L1 to a fairly limited extent. L1 words formed only 7% of the total number of words produced and L1 turns accounted for only 16% of the total number of turns.

A number of reasons could explain this modest use of L1 found in the data. Reported interviews in Storch and Wigglesworth (2003) suggest that learners are aware that they should avoid using L1 in L2 classes. In this study too, it seems that the participating learners saw these pair work activities as an opportunity to practice their L2. Fahad and Salam, the L–L pair who used their L1 the most extensively, were clearly aware that they should be using their L2. The comments made and the amount of whispering in the following excerpt from their jigsaw task show evidence of this awareness.

Excerpt 11:

3 Fahad: <whispering to Salam> ***lehtha lahtha*** … ***nratebha hena asoorah thi m' thi m' thi*** {*wait wait, let's order it, this with this, this with this*} … ***maleek men elmsajal*** … ***khallah*** {*don't worry about the recorder*} …

[Fahad & Salam, jigsaw]

Swain and Lapkin's (2000) study distinguished (post hoc) between relatively weak and strong dyads on the basis of rating their completed tasks. The researchers found that weaker pairs used more L1 than stronger pairs, but that task type (jigsaw or dictogloss) did not influence the amount of L1 used. In our study, task type seemed to affect L1 use but mainly of L–L pairs. That is, L–L pairs used more L1 than H–H and H–L pairs, but only when completing the editing task. There was little difference in the amount of L1 used between the three proficiency groups on the other two tasks (jigsaw and composition).

One reason that may explain the greater use of the L1 particularly by L–L pairs on the editing task is the difficulty and focus of this task. The text-editing task, unlike the other two more meaning-focused tasks, required students first to understand the meaning of a text written by other students and then to improve it. And thus, when confronted with a difficult task, the lower proficiency learners needed to use all of their available resources (among which is L1) to complete it.

Another reason that may explain the greater use of the L1 on the editing task relates to the sequencing of the tasks. The editing task was the third task the students were asked to complete. It may be that by then the learners felt more comfortable about working in pairs with each other (as suggested by one of the reviewers). They may have also become more comfortable with the idea of using their L1 in completing the tasks, and particularly so when confronted with a difficult task. This may explain why it was pairs who were coded as moderate or high L1 users who seemed to increase their use of L1 on the editing task. In contrast, pairs who were coded as low L1 users used little L1 throughout. Future studies would need to investigate the effect of task sequencing by using a counter-balanced research design.

The study also sought to investigate the functions served by the L1, and the effects, if any, that the type of task and proficiency pairing had on these functions. The study found, as was found in other studies (e.g. Swain & Lapkin, 2000; Storch & Wigglesworth, 2003; Thoms et al., 2005) that the L1, when used, served a number of important functions, but that the predominant function across all tasks and proficiency groupings was task management (45% of all L1 turns). This was followed by deliberations over vocabulary (26% of all L1 turns). The data of the pair talk showed that when the L1 was used for task management, it afforded learners an opportunity to gain a joint understanding of the task requirements, particularly of novel tasks (jigsaw) or difficult tasks (editing) and thus complete them. When used in deliberations over vocabulary, it enabled learners to give and receive timely assistance about word meaning and word searches, thus facilitating L2 learning. It was interesting to note that learners, regardless of L2 proficiency level, could offer such assistance (see Excerpts 7 and 8). Moreover, the L1 was also used in private speech, where the learners seemed to use the L1 to confirm or firmly establish in their own minds the meaning of certain words. These functions of L1 accord with the

sociocultural views of language as an important cognitive and psychological tool, mediating social interaction and mental activity.

A closer examination of the use of L1, particularly in serving a task management function, suggested that the L1 was also used as a social tool that reflected and maintained the relationship formed by the pairs, whether collaborative or dominant/passive. In collaborative pairs – found mainly in the equal proficiency pairs (H–H and L–L) – the L1 was used to offer to share the role of the scribe and to invite suggestions. In dominant/passive pairs, found only in unequal proficiency pairs (H–L), the L1 was used to issue orders and direct the writing activity.

To conclude, the findings of this study show that learners in an FL setting, when asked to work in pairs, do use their L1 but to a limited extent, a finding which should help allay the concerns of teachers in such settings. Furthermore, the findings suggest that the assignment of tasks needs more careful consideration than proficiency pairing of students. It may be (see also Storch, 1999) that the editing task is more suited for more proficient L2 learners; and, when assigned to learners of lower L2 proficiency, it could encourage an unacceptable level of L1 use.

The findings also show that the use of the L1 by the learners seems to serve important cognitive, social, and pedagogical functions. This of course is not to say that learners should be encouraged to use L1 extensively. Rather, the findings suggest – as Swain and Lapkin (2000) pointed out and as Brooks-Lewis (2009) intimated – that to restrict or prohibit the use of L1 in L2 classes is to deny learners the opportunity of using an important tool.

Given the small-scale size of the study, it was not possible to use inferential statistics. Thus, the findings are suggestive and need to be interpreted cautiously. Furthermore, as in the case of other studies on the use of L1 (see Swain & Lapkin, 2000; Storch & Wigglesworth, 2003), there was great variability between the pairs within each proficiency group as to the amount of L1 used. This variability precludes strong conclusions being drawn about correlations between L2 proficiency and L1 use. Future research needs to consider a larger number of pairs in each proficiency group, to use pre-tests to obtain a more accurate measure of the learners' L2 proficiency, and to use a counter-balanced research design.

Despite these limitations, the study does offer new insights into learners' use of L1 in task-based activity. It extends on previous research on the use of L1 by comparing task type with the same learners, by examining the effect of L2 proficiency pairing on the use of L1, and by conducting the investigation in a context in which pair work is not common.

## Notes

1 High L2 proficiency learners in the H–H had a comparable L2 proficiency level to high learners in the H–L pairs, as was the case for those deemed to have low proficiency in the H–L and in the L–L pairs.

2 The data of three pairs had to be omitted from analysis, one from each proficiency grouping. These pairs had very short dialogues on one of the three tasks (fewer than 20 turns), and the discrepancy between the length of their dialogue on one of these tasks and the other two tasks suggested possible technical difficulties with the recording equipment.

3 Words in bold italics are in Arabic (L1), with close English translations given in the bracket immediately after.

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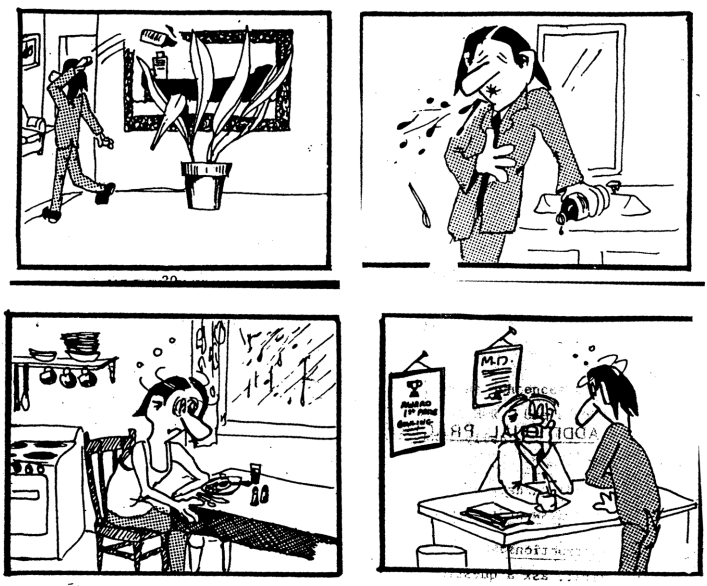
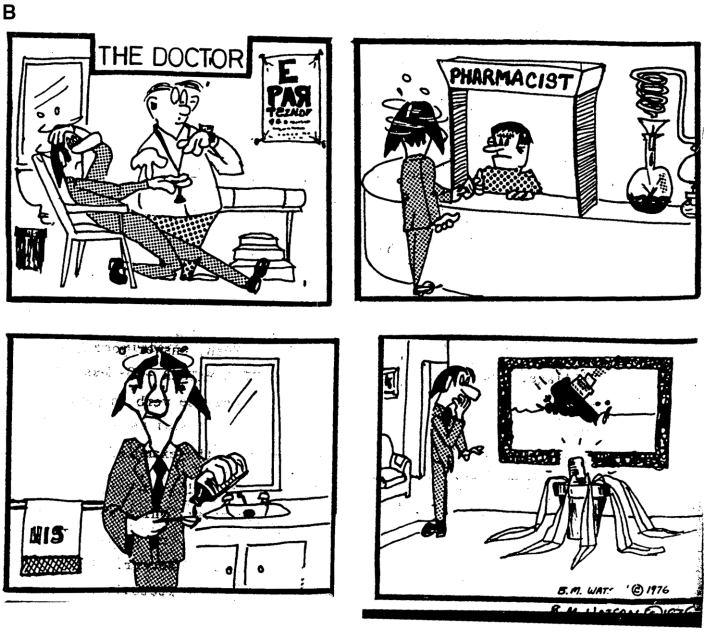
## Appendix 1 Jigsaw

Each one of you has four pictures. Describe your pictures to your partner then jointly arrange the pictures in a sequence and write a text about them.

A



B



## **Appendix 2** Joint composition

Choose one of the following topics and jointly write about 3–4 paragraphs about it.

1. Currently, the Saudi economy is facing some problems. Discuss these problems and try to come up with possible solutions for them.
2. Health is a concern for many people. Discuss some of the things that may negatively affect our health and how a person can maintain good health.

## **Appendix 3** Text editing

Attached is a text written by a Saudi student. Jointly with your partner edit the text, focusing on grammatical, spelling, or expression problems.

### *How you save your healthy*

You can buy your healthy by make contract with yourself as don't think a lot of thing in this life. For example, don't think about the small points daily and focusing to the main points which very important. And you can flow up the healthy instruction as don't drink or eat the sweets or salt specially in forty age. And you can go away from argument with the other person.

If you have a money, you can flow up schedule feed and appointment schedule with the doctor every three months to check your body and your blood temperature and sugar level. Also it is very important to check your teeth in the distance. Finally you have to walk everyday nearly one hour and read the healthy magazine and don't forget you will be die, that's why make the world too easy.