1 Introduction

This study shows the first comparative results of the Italian language test given to native Italian speakers and Dutch learners of Italian. This test was built to elicit specific syntax structures that could be compared with the Dutch learners' results in order to answer preliminary contrastive hypotheses:

1. There may be difficulties in the acquisition of the *demonstrative + possessive* or *article + possessive* phrases since this structure is absent in Dutch.

2. There may be intereference in the assignment of gender to Italian nouns which can take both neuter and non-neuter gender in Dutch.

Test-takers had to complete 74 sentences where either 1 or 2 words were missing while Dutch test-takers had to complete 7 more sentences that included pictures referring to their topic. The focus of the research, in its syntactic part, is to understand how much Dutch people resort to the compound constructions of *demonstrative + possessive* or *article + possessive* in their Italian L2, and at which point of their acquisition process they may incorporate this syntactic structure, absent in their L1, as in the other Germanic languages.

Even though Italian grammars refer to the possessives in these constructions as *possessive adjectives* (Maiden and Robustelli, 2007), Dutch grammars (Broekhuis and Vos, 2015; Donaldson, 2008)refer to these as *possessive determiners* or *possessive pronouns*(Donaldson, 2008). In order to maintain clarity and be consistent, these possessives will be referred to as *possessive determiners* henceforth. It was decided to compare the Dutch results with the ones from Italian native speakers to determine how much Italian native speakers themselves resorted to these features and which ones they prefer.

By way of example: in Italian, demonstrative determiners can be followed by possessive determiners[1] just as determiners can be followed by the same in constructions like the following:

Quel	mio	amico
DEM	PO	friend
That	*my*	*friend*

Results from a task, the one with 7 fill-the-blank sentences with pictures, involving gender assignment, in the L2, to Dutch nouns that can take both genders will also be included.

It is important to make clear, however, that while the latter task can have either a positive or negative outcome, since these nouns cannot take both genders in Italian, the previous 74 sentences can have different solutions, even without determiners, that can still keep the sentence grammatical.

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[1]Possessive determiners usually require an article to precede them in Italian. They can also be preceded by determiners, such as the demonstratives previously mentioned. However, they concord with the object's gender just as Dutch possessive determiners do (Maiden and Robustelli, 2007).

	Mas.	Fem.
The	Il/Lo	La
A/An	Un/o	Una
This	Questo	Questa
That	Quello	Quella

Table 1: Italian singular demonstratives.

2   Literature

This study looks at the data collected from many different points of view according to the variables made up by the metadata. Therefore, previous studies and theories which are related to the metadata will be presented and discussed starting from the age variable.

The fundamental difference hypothesis[2] (Bley-Vroman, 1989) is a theory which defines the acquisition process and result of adult L2 speakers as different from that of younger people. Even though this theory may seem to be applicable in general to all L2 learners, Bley-Vroman (1989: 60) clearly states that this hypothesis is built on the child vs. adult differences and not in the L1 vs L2 general ones. According to this hypothesis adult learners cannot ever fully access the language system present in the TL and reach a complete acquisition of the language as children can, since part of what differs from the L1, and is not similar to the L1, is dealt with by abstract problem-solving processes.

Critiques to this approach and the data used to back it up are present (Dekydtspotter, D. Schwartz, and Sprouse, 2006) and they mainly suggest that even though there is a difference in the acquisition of the L2, but there are not necessarily differences in the processing mechanisms of L2 learners. Even though the results of this test do not include children, elderly learners (over 60) were compared to younger learners (under 60), also according to their level.

On the level of proficiency of the test-takers, the criteria chosen to categorize them are those of the Common European Framework of Reference for Languages (CEFR) and they start from A1-2 for beginners, then B1-2 for intermediates and ultimately C1-2 for mastery and proficiency. Collecting tests from students of different levels allowed an apparent-time analysis on the acquisition process and to detect trends on the use of compound structures.

When looking for results on trends that are meant to cover several stages of the learning process two main behaviors come up that relate to the results of this study:

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[2]In more detail, Bley-Vroman puts forward the idea that L2 learners, thanks to their metalanguage knowledge, are able, to different degrees which can vary from each individual, to build the foundations of the L2 they are learning on the features that they believe are more likely to be shared with the TL. The ability to guess what is shared may be the result of innate cognitive abilities.

- Overuse / Underuse (White, 2008; Ionin, 2002): In general, overuse refers to the excessive use of a form by a learner instead of others that could also be acceptable. In some research it is also considered as a behavior that sees a learner use erroneously one form over another (e.g. definite articles over indefinite ones in Ionin) in certain semantic contexts. This fluctuation seems to reduce along with the acquisition progress, so that advanced learners show more limited fluctuation and semantic choices closer to the TL.

- Overgeneralization (Cabrera and Zubizarreta, 2003): Like the previous, overgeneralization happens when learners apply a form to not only appropriate contexts but also to inappropriate contexts where they result in ungrammatical productions (e.g. causative alternation in Spanish L1 learning English L2 in Cabrera and Zubizarreta).

- U-shaped learning (Gass and Selinker, 2008: 236-241): A linguistic use pattern divided in 3 stages where learners use a form correctly in the first stage, then wrongly in the second and finally correctly again in the final one.

3   Methodology

A test was developed following some of the instructions found in Gass and Selinker (2008) and Dörnyei (2002). Some of these instructions include keeping the amount of time required to finish the test at no more than 30 minutes, in this case test-takers never needed more than about 25 minutes to complete it, have a proper layout which makes it look professional but also appealing to the learner. For this reason LaTeXwas used to typeset the test. Finally, the test was given to both Italian native speakers (only in the online format), in order to have a control group, and to Dutch learners of Italian.

For the Italian test-takers, the test was posted on different Facebook groups (mainly university groups) and given to adults through a networking method, were younger test-takers were invited to pass the test to either their parents or relatives so that they could take it too. The online Dutch test-takers were found through the same method initially, but also thanks to Dr. M.E. Sciubba from the university of Tilburg who put me in contact with several teachers of Italian L2 in the Netherlands and Flanders. The test-takers of the paper-based test were found by contacting different language schools across the Netherlands, (Eindhoven, Gouda, Tilburg and Leiden).

Both groups were given a written task where they had to fill in missing words in 74 sentences, while Dutch learners also had to complete a short task where they had to assign a gender to 7 Italian nouns in 7 sentences with missing articles and pictures of these nouns in their Dutch marked form. Some of the 74 sentences were selected from a corpus (Italian Web Corpus) on the online

platform SketchEngine and they were meant to elicit the following items by having the test takers fill 1 or 2 blank spaces for each sentence:

- 8 "Quella" (feminine) and 10 "Quel" (masculine) as demonstrative pronoun tokens followed by different possessives such as "Mia", "Tuo" and "Loro".

- 4 "Questo" (masculine) and 3 "Questa" (feminine) as demonstrative pronoun tokens followed by either the possessive "Mio/a" or "Tuo/a".

- 19 sentences "Il" (masculine) or "La" (feminine) as determiner tokens followed by either the possessive "Mio/a", "Tuo/a" or "Loro".

These sentences were slightly modified to make them accessible to Dutch beginner students and were kept modified for the Italian students as well in order to make the environment, from which the data was collected, consistent. The rest of the 74 sentences were meant to test gender assignment to irregular Italian nouns. These sentences were kept in the test for the Italian native speakers mainly with the intent of creating white noise and keep the test-takers from figuring out exactly which features (in this particular case the use of demonstratives) were being studied. The test was given both online and on paper, this also allowed to compare the learners based on that, with quite interesting results. The online version was created with Google Modules[3].

The results were processed in Python3.6 using the Matplotlib and Pandas libraries. Blanks left empty were obviously ignored in the calculations, but test-takers who left a page or more blank were excluded from the study, except for the gender assignment task with pictures which most test-takers have completed. The p values were instead calculated in R through the chi-squared test.

4   Metadata

Out of the 41 Dutch students that have taken the test so far, 10 of them are males and 31 females for corresponding percentages of about 24% and 76% as represented in the pie chart below. Due to the low number of males a gender comparison in proficiency was excluded, given the fact that the test-takers had to be divided into groups based on their level as well. Men make up 30% of the Italian test-takers control group, and women 70%.

Finally, out of 38 learners of Italian, 29 of them (76%) are learning Italian for fun and/or travel, while 4 of them for work, 1 because of their ancestry, 3 because of their parterner and 1 for study but also for fun. It is clear then, that most are learning Italian for leisure and should, therefore, have a lower affective filter[4].

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[3]The complete test can be found at `https://github.com/andcarnivorous/DutchLearners/blob/master/Test/onlinetest.pdf`.

[4]The affective filter is a theory in L2 acquisition according to which environmental, social and personal factors can influence the level of acquisition of learners. A negative environment,
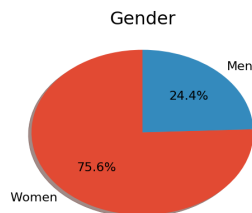
Figure 1: Dutch Gender Distribution

The age distribution is quite different from the one of the Italian test-takers. While in the Italian test-takers the median age is 28 and the average 25, in the Dutch group the median is 57 and the average 53. The age distributions can be consulted in the boxplots in Figure 2

5 Dutch Gender Assignment

One task in the written test consisted in completing 7 sentences where an article was missing for a noun chosen from a list of nouns that can take both genders in Dutch Donaldson (2008) [5] and that also have the same form in both cases in Italian. The test-takers had no information on what kind of item was missing and had, therefore, the option of completing the sentences as they wanted. These 7 sentences also included pictures that were meant to remind Dutch speakers of the marked gender assignable to the noun[6].

The objective was to find out whether there could be any interference from the L1 that could have the learners assign the wrong gender to the nouns in Italian. It is important to note that, regardless of whether the students used "*Il*", "*Lo*", "*Un*" or "*Uno*", only the gender assignment was taken into account and which kind of article they used to do it was not taken into consideration. The pictures used can be found in Appendix A1.

As the results from Table 2 show, there are no problems of interference in most sentences (blank or incomplete answers were filtered out). Only the nouns "*Corte*" and "*Diamante*" seem to cause wrong answers and, if analyzed more closely, a small part of the wrong answers consists in the use of "*Le*", which is the feminine plural definite article. This may be due to the fact that these nouns end in -*e*, so the learners might just make a concordance based on the

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bad relationships with teachers, having to learn a language without the desire to do so are all factors that can contribute to raising the affective filter and obstruct the learning process (Cardona, 2010)

[5]By way of example "de diamant" and "het diamant".

[6]The marked gender would be the least commonly used, like "het diamond"
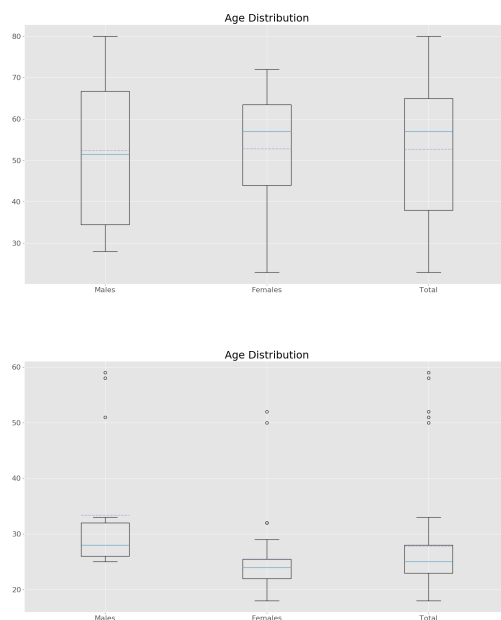
Figure 2: Dutch and Italian Age Distributions

grapheme without taking into consideration the fact that the noun is singular. This seems to happen proportionally with the same incidence in both cases.

Article	Nouns	Right	Wrong	Total
La (Fem.)	Corte	26	13	42
Il (Mas.)	Diamante	28	13	44
Lo (Mas.)	Smeraldo	40	0	40
Il (Mas.)	Corno	42	0	42
Il (Mas.)	Nastro	43	0	43
Il (Mas.)	Punto	41	0	41
Lo (Mas.)	Zaffiro	43	0	43

6   Specific Percentage of use "Quello/a" & "Questo/a"

When analyzing only the sentences where originally there was "Quello/a" or "Questo/a" in the blanks, the predictable outcome which sees Dutch people

Nouns	Right	Wrong	Le	Total
Corte	26	13	3	42
Diamante	28	13	3	44

Table 2: Gender Assignment Results

choosing to use the two less than Italians is confirmed, the difference in use is quite striking since the occurences in Dutch learners of Italian are below 1% and 17% for Italians. However, it is interesting to note how Dutch test-takers have used the partitive articles "Del / Della"[7] in these sentence, it is only a 3% but it is proportionally more than the occurences found in Italian native speakers that are less than 1%.
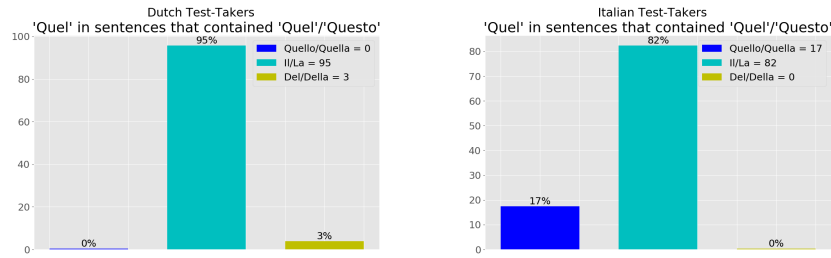

Figure 3: "Quel" use in sentences that originally contained "Quel/Questo"

7   ART./DEM. + POS Frequency of use

In the general results, Dutch students use the single article structure more than Italian test-takers in a difference of around 6%. This shows that the compound structure, even though it might be acquired, is not used as much. This result has been represented in the bar chart in Figure 4. It is critical to understand that even Italian native speakers opted for a single article structure when they had two blank spaces, this means that, even if in a low 10% percentage, native speakers themselves sometimes prefer to use only the article even if they are given the compound construction choice.

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[7]The partitive articles are defined as "indicates some part (an unspecified number) of a group or category of things/people; it is formed by the preposition di combined with the definite article, and following a similar pattern, changes according to gender, number and the word that follows" Proudfoot and Cardo (2005).

It is important to remind, though, that what it is being look at here is not whether the test-takers have used the right gender, the right syntactic element like a definite or indefinite article or a demonstrative, but whether they used a compound structure consisting in $[ART. / DEM. + POS]$ or not. Moreover, these answers are considered as variations, since more possible solutions are available to complete the sentence without making them ungrammatical; this is similar but not exactly the same as an error analysis, since it is possible that the frequency with which a construction is used over another is part of what differenciate the interlanguage (Selinker, 1972) spoken by the learner from the TL. What is being calculated and compared here, therefore, is the degree of variation between Italian native speakers and Dutch learners of Italian in choosing between a compound structure or a article/determiner-only structure.
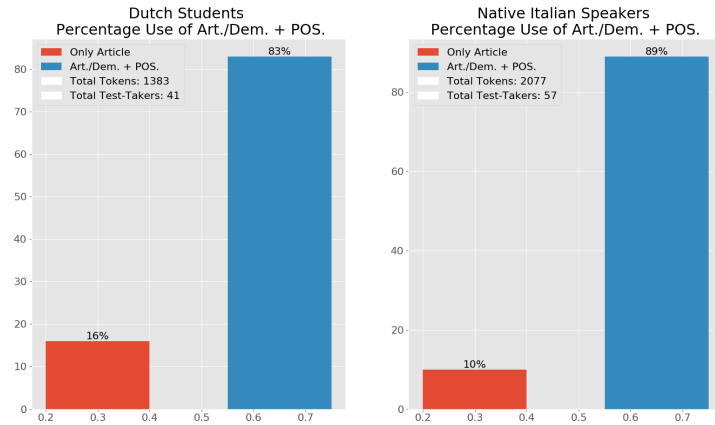

Figure 4: Only article & compound structure use.

The "Only Articles" tokens contain both definite (*"Il"*, *"Lo"*, *"La"*) and indefinite articles (*"Un"*, *"Uno"*, *"Una"*).

8

7.1 Proficiency Level Comparison

After the general results, test-takers were divided according to their level of proficiency. In order to keep the sample numbers reliable, three major groups that included both levels 1-2 were formed providing the A1-2, B1-2, C1-2 groups. Based on them quite different pictures came out, highlighting a trend which could be related to the Fluctuation Hypothesis (Ionin, 2002). Each group can be considered as a phase in the acquisition process of the [*ART. / DEM. + POS*] compound structure. The results for each single group can be found in the bar charts in Figure 6.

In the first stage, A1-2 students seem to not have acquired the compound structure as well as the students from the more advanced groups. Their extensive use of just the article alone, in more than in 1/4 of the cases, indicates that this structure has yet to be acquired completely at this time in the learning process.

In the second stage, B1-2 students are the ones who use the article alone the least, they use the compound structure more than the C1-2 group and even more than Italian native speakers. The difference is statistically significant compared to Italians and this shows a trend where Dutch learners go from using the compound form too little to using it even more than Italians.

Finally, in the third stage, C1-2 Dutch learners of Italian seem to fall back on their use of the compound structure, they end up using it as much as Italians with a marginal difference that is not statistically significant. It could be inferred, then, that once reached the C1 or C2 level the Dutch students have an alternate use of only the article and the compound form which is similar to that of Italian native speakers. Although, it is still interesting that before reaching this level an "overuse" of the compound structure seem to take place in the B1 and B2 levels.

This particular trend, once rendered in a graph, like the one in Figure 5, shows how in the acquisition process the learner goes through a stage of overuse and overgeneralization after a first stage of avoidance. However, this overuse is then followed by an adjustment of the frequency with which the only-article form is resorted to which is really close to the native speakers' one.

While the u-shaped learning phenomenon sees a good start in the production of a feature, followed by a deviant production and finally a proper one again, the results here collected may be closer to claims similar to those of (Ionin, 2002), that see the learning process as a fluctuation and over time becomes more narrow in advanced learners, resulting in frequency rates similar to those found in native speakers. Nevertheless, according Fluctuation Hypothesis (FH), when learners enter in contact with what can be defined a new category[8] (Gass and Selinker, 2008: 101) they should overuse both the article-only structure and the compound structure. Instead, the fluctuation seems to be time-bound to the acquisition process, going from one extreme at the beginning, to the other

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[8]In this study's case the new category would be the compound structure, which is a combination of syntactic items present in both languages (articles, demonstratives and possessive determiners) but their combination in the same NP is not possible.

to then finally converge to a closer point with the Italian constant. It is true that the FH deals with semantic issues, but the syntactic similarity in this case is in the shared new category difference that Dutch learners of Italian have like the Korean and Russian learners of English do.
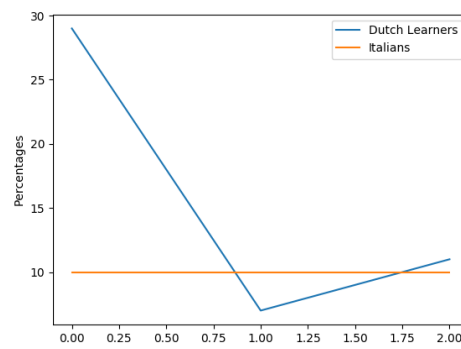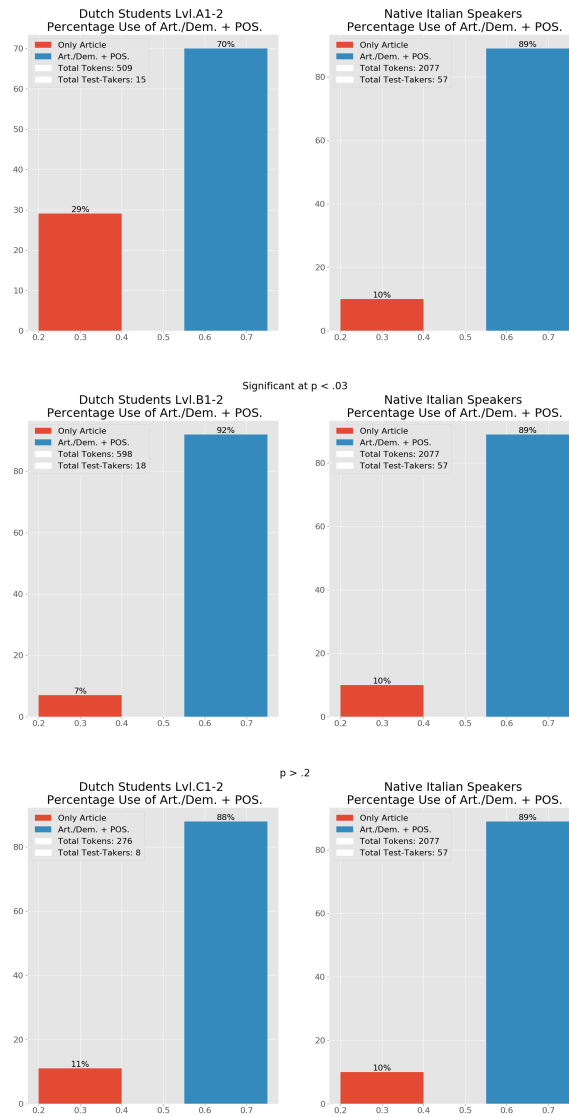

Figure 5: Acquistion Trend

Figure 6: Compound structure use results per group.

8 Age Comparison

Interestingly enough, elders do not seem to score differently in the use of the compound structures from younger test-takers in a general analysis. Although, once they are divided into the A1-2 and B1-2 groups (there are less than 5 C1-2 test-takers and they are therefore excluded) a different pattern emerges.

	Only	Comp	Total
Over 60	73	411	484
Under 60	155	744	899
			$p < 0.302$
Over 60-B	25	217	242
Under 60-B	13	343	356
			$p < .002$
Over 60-A	35	140	175
Under 60-A	113	221	334
			$p < .002$

Table 3: Age Results and p values

According to these results, learners over 60 produce the compound structure more than the under 60 group at the A1-2 level, while under 60s produce more compound structures than over 60s in the upper B1-2 level. This means that at the beginning, older speakers tend to use the new category more, but then they use it less.

9 Online-based vs. Paper-based Test

The results indicate that online test-takers tend to use the compound structure more than those who took the paper-based test with a p value of < 0.01. This proves that online test-takers used the Italian structure, absent in their language, more extensively. However, It could be argued that online test-takers might have consulted online or resources available at hand, although this seems unlikely given the high number of sentences in the test to complete and the fact that the test itself already requires between 15 and 25 minutes to be completed, according to the level of the test-taker. If we are considering these results from a frequency point of view and not from an absolute "right" or "wrong" position, then it seems that online test-takers produced the compound structure more frequently e more closely to Italian native speakers.

These results contradict some of the literature on comparability in computer-based (or online-based) vs. paper-based tests that see test-takers of paper-based test score higher than the other group, like Hosseini, Jafre, and Baghdarnia (2014) which is based on L2 acquisition tests. On the other hand, Fitzpatrick (2006) highlights how in 20 years of research (now 30) there are still contrasting

	Only	Comp	Total
Online	91	597	688
Paper	137	558	695
			$p = 0.01$

Table 4: Online-based vs. Paper-based results

results at times and there is still no certainty on which of the two kinds allow students to perform at their best. Results such as those of Liu (2015), however, show how exposure to computer-based technologies actually allow students that take computer-based tests to perform better than those who do not, creating a worrying gap (which will probably increase in the future since new generations deal with computers since elementary school or kindergarten) between students who can afford technology and those who cannot. Then, it could be hypothesized that the sample of this study included a high number of online test-takers who have had to type and deal with computers a lot in their lives and, therefore, they do not have to waste too much cognitive potential into finding the right keys on a keyboard.

10   Conclusion

First of all, when analyzing only the sentences where originally "Quello/a" or "Questo/a" were present, Dutch learners of Italian have showed to resort to the same noticeably less than Italians. Moreover, Dutch learners seem to resort to the partitive articles "Del / Della" in a small but significant proportion in these same sentences.

Second, The results on the use of possessive determiners with articles or demonstratives indicate that Dutch learners of Italian tend to use this construction not present in their language more than Italians at the B1 and B2 level, while they tend to avoid it at the A1 and A2 levels and they finally use it as much as Italian native speakers at the level C1 and C2.

In addition, there does not seem to be relevant differences in the use of compound forms between elderly learners and young or adult learners from a general point of view, but dividing them also by level shows a pattern where older speakers tend to use the [*ART. / DEM. + POS*] construction more than younger learners at the beginning of their learning process (A1-2) and then switch at the next level (B1-2) with younger learners using the compound construction more. Also, a difference arises between who took the online-based test and who took the paper-based one, where the latter group used the compound structure less than the first. This, however, could be attributed to the fact that Dutch test-takers may have cheated, even though, given the already time-requiring nature of the test, it is unlikely to think that someone would invest even more time in the task by checking online how all of the sentences with double blank

spaces could have been completed. In addition, such a contrasting result with good part of the literature on the topic in support of no difference between the two approaches or better results with paper-based test might suggest that the online test-takers from this study were simply more used to type on a keyboard and using a computer than usual.

Finally, on the gender assignment task with pictures, no signs of interference seem to be happening if we take into account that the only two nouns which have a record of errors are two nouns ("Diamante" and "Corte") ending with *-e*, which can confuse the learners since nouns ending with such a suffix might be feminine or masculine in Italian. mistakes.

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