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**SIGNATURES OF PRACTICE: EXPLICIT INSTRUCTION ABOUT
L1 PROCESSING ROUTINES CAN IMPROVE L2
GRAMMATICAL PROCESSING**

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Review Only

Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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3 **SIGNATURES OF PRACTICE: EXPLICIT INSTRUCTION ABOUT L1 PROCESSING**
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5 **ROUTINES CAN IMPROVE L2 GRAMMATICAL PROCESSING**
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10 This study examined the extent to which explicit instruction about L1 and L2 processing routines
11 improved the accuracy and speed of learners' responses during sentence interpretation practice.
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13 Fifty three English-speaking learners of L2 French were assigned to one of the following
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15 treatments: (1) a 'core' treatment consisting of L2 explicit information (EI) with L2
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17 interpretation practice (L2-only group), (2) the same L2 core + L1 practice with L1 EI (L2+L1
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19 group), or (3) the same L2 core + L1 practice but without L1 EI (L2+L1prac group). Findings
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21 indicated that increasing amounts of practice led to more accurate and faster performance only
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23 for learners who received L1 EI (L2+L1 group). Coefficient of Variation analyses (Segalowitz &
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25 Segalowitz, 1993) indicated knowledge restructuring early on that appeared to lead to gradual
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27 automatization over time (Solovyeva and DeKeyser, 2017; Suzuki, 2017). Our findings that EI
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29 and practice about L1 processing routines benefited the speed, accuracy, and stability of L2
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31 performance have implications for L2 learning theories, the role of L1 EI in L2 grammar
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33 learning, and L2 pedagogy.
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42 Key words: Explicit instruction, practice, morphosyntax, L1 influence, automaticity, L2 learning
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Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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3 First language (L1) knowledge and L1 processing routines can heavily influence second
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5 language (L2) online processing (Ellis, 2006; Ellis, Hafeez, Martin, Chen, Boland, & Sagarra
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7 2014; Hopp & Lemmerth, 2016; Roberts & Liszka, 2013) and offline interpretation and
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9 production (Ellis & Sagarra, 2011; Huensch & Tracy-Ventura, 2017; Murakami & Alexopoulou,
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11 2016). Several L2 theories of input processing additionally foreground a critical role for L1, such
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13 as L1-entrenched attention allocation and blocking (Ellis, 2006; Cintrón-Valentin & Ellis, 2016)
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15 and L2 processing routines that can be influenced by the L1 (MacWhinney, 2005, 2012;
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17 O'Grady, 2013; VanPatten, 2002). Very little research, however, has examined the extent to
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19 which this research evidence base about L1 influence in L2 acquisition can be used to enhance
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21 the effectiveness of explicit L2 grammar learning, including theorizing about how EI about the
22
23 L1 might influence L2 performance, online or offline. The research that exists to date in this area
24
25 showed that explicit information (EI) about L1 and L2 form-meaning mappings for
26
27 crosslinguistically different target features immediately benefitted written, untimed L2
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29 production (Ammar, Lightbown, & Spada, 2010; Horst, White, & Bell, 2010; Kupferberg, 1999),
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31 whereas EI about the L2 only (but not about the L1) for crosslinguistically different features did
32
33 not benefit performance on grammaticality judgment tests (Tolentino & Tokowicz, 2014).
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40 Building on this agenda, McManus and Marsden (2017a, 2017b) provided EI about the
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42 L1 (unlike Tolentino & Tokowicz 2014) and interpretation practice of both French (L2) and
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44 English (L1) sentences (unlike any of the aforementioned studies) to investigate their
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46 instructional effectiveness for aspect in L2 French, a well-documented area of difficulty due to
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48 crosslinguistic differences (Howard, 2005; Izquierdo & Collins, 2008, McManus 2013, 2015).
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50 McManus and Marsden's explicit instruction lasted 3.5 hours and was delivered over four weeks.
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52 EI about L1 and L2 processing routines followed by interpretation practice of English (L1) and
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3 French (L2) sentences improved learners' speed (online) and accuracy (offline) of aspectual
4 interpretation (*Imparfait, Passé Composé, Présent*) four days after instruction (Immediate
5 Posttest) and six weeks later (Delayed Posttest). Whilst that post-instruction evidence suggested
6 that L1 EI benefited L2 online and offline performance, we understand very little about the
7 nature of the actual learning trajectory *during* the practice, including the extent to which learning
8 during the practice was affected by receiving pre-practice EI about the L1. The current study
9 addressed this gap by examining learners' item-by-item interpretation of French sentences while
10 undertaking practice, to better understand how performance during the practice contributed to the
11 learning gains at Immediate Posttest and Delayed Posttest as previously reported by McManus
12 and Marsden (2017a, 2017b). To our knowledge, no previous research has investigated the extent
13 to which EI about L1 and L2 processing routines can affect the speed and accuracy of learners'
14 responses during practice.

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31 The current study additionally addressed a potential methodological limitation of
32 McManus and Marsden's (2017a, 2017b) study, in which the two crosslinguistic outcome tests
33 (where items provided an L1 context followed by L2 stimulus) may have advantaged the L2+L1
34 group. The current study removes this possible confound by examining performance during L2
35 practice in which *no* L1 context was given in the practice sentences. Thus, benefits for L1
36 explicit instruction on activities that did not coerce crosslinguistic processing would suggest that
37 McManus and Marsden's previous findings were unlikely to have been an artefact of the nature
38 of the tests themselves

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PRACTICE, AUTOMATIZATION, AND ITS SIGNATURES

Research examining the effectiveness of EI and practice have mostly assessed learning using offline outcome measures, often immediately after instruction without Delayed Posttesting (for review, see Shintani, 2015), with very few analyses of performance during practice. These lines of research cannot (and have not sought to) address theoretical questions about learning sub-processes during practice. Skill Acquisition Theory (Anderson, 1983) proposes sequenced sub-processes that assign practice a key role in development (see also DeKeyser, 2017). First, establishing reliable and accurate declarative knowledge is argued to be essential (Cornillie, Van Den Noortgate, Van den Branden, & Desmet, 2017; DeKeyser, 1997), although no research to date has examined whether providing information about the L1 may affect subsequent stages of skill acquisition. Procedural knowledge is thought to underpin the conscious rule-governed behaviour that rehearses this declarative knowledge and has been characterized by decreasing error rates and faster reaction times. Over time, such practice can lead to automatization, “a fast, parallel, fairly effortless process that is not limited by short-term memory capacity, is not under direct subject control, and is responsible for the performance of well-developed skilled behaviors” (Schneider, Dumais, & Shiffrin 1984, p.1). Although the accuracy and reliability of declarative knowledge representations prior to practice are argued to play a key role (Anderson, 1983), little research exists into longitudinal behavioural signatures that may follow this new declarative knowledge about language, i.e., during practice. Such data are critical for determining the validity of skill acquisition theory in accounting for aspects of L2 learning.

To our knowledge, only two studies have examined fine-grained signatures of learning in longitudinal designs. Both found that early on during the practice, reaction times (RTs) decreased and accuracy improved as a function of practice, with smaller changes later on. In

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3 DeKeyser (1997), all participants received the *same* EI about morphosyntax of a novel language
4 and were assigned to one of three practice conditions: comprehension, written production, equal
5 proportions of both. Practice lasted eight weeks, distributed over fifteen sessions (twenty-four
6 practice items per session, with feedback for incorrect responses). Longitudinal analyses across
7 all practice sessions showed that performance was strongly influenced by practice type:
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14 “performance in comprehension or production is severely reduced if only the opposite skill was
15 practiced” (p. 213, see also Li & DeKeyser 2017). Furthermore, independent of practice type,
16
17 DeKeyser found that RTs decreased and accuracy improved as a function of the practice, most
18 noticeably between the first two sessions, with smaller changes between latter sessions. Similar
19 findings were reported by Cornillie et al., (2017), who documented signatures of learning
20 English morphosyntax during online gaming. All participants received the *same* pre-practice EI
21 about the L2, across all treatment groups (as in DeKeyser, 1997), completed the same
22 comprehension practice, but received different types of corrective feedback during the practice:
23 correct/incorrect feedback or correct/incorrect feedback with EI about the L2. Practice was
24 game-based grammaticality judgements over 31 sessions (192 practice items per session) in two
25 practice sessions (with two weeks between them), with two short reading comprehensions before
26 and after gaming. Two target features were investigated: English quantifiers and dative
27 alternation. Results showed similar accuracy scores for both target features in the first practice
28 session. In the second practice session, however, quantifier accuracy scores were higher than
29 those for the dative alternation. In terms of feedback type, additional EI appeared to provide few
30 benefits for dative alternation. Like DeKeyser (1997), within-group analyses showed that
31 increasing amounts of practice led to faster and more accurate performance. The largest
32 improvements were also found in the earlier practice sessions, with fewer improvements later on.
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3 Because faster RTs could index both automatization (a mechanism within skill
4 acquisition) and, more simply, 'speed-up' (Segalowitz, 2010; Segalowitz & Segalowitz, 1993),
5 more accurate and faster performance do not necessarily reflect automatic/unconscious
6 processing. Automaticity is the restructuring of underlying processing routines that enhances
7 processing efficiency and stability, but speed-up corresponds to accelerated performance without
8 necessarily indicating qualitative restructuring (Paradis, 2009; Segalowitz, 2010). Segalowitz and
9 Segalowitz (1993) proposed that processing *stability* combined with faster performance may be
10 signatures of greater processing efficiency. To tease apart automatization from processing that
11 speeds up but in the absence of change in the nature of the knowledge, as would be required for
12 proceduralisation and automatization, researchers have used the Coefficient of Variation (CV), a
13 measure of processing stability (mean SD divided by mean RT). CV distinguishes between a
14 general speed-up (where SDs and RTs decrease at the same rate) and automatization (where the
15 rate of decrease in SDs exceeds the rate of decrease in RTs). This is because automatization is
16 understood to entail elimination or reduction of inefficient sub-processes/components that are the
17 cause of processing variability. Thus, processing *stability* is reflected by SDs of RTs getting
18 narrower over time at a faster rate than the decrease in RTs over time, resulting in a trajectory of
19 decreasing CVs.
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42 CV interpretation in L2 research is mixed. Cross-sectional designs have shown CV
43 reductions as instruction/proficiency level increases (Hulstijn, van Gelderen, & Schoonen, 2009;
44 Lim & Godfroid, 2015), but longitudinal designs have shown that CVs can be more variable
45 (Brown & Gaskell, 2014; Solovyeva & DeKeyser, 2017; Suzuki, 2017). Time is one potential
46 explanation for these findings: longitudinal analyses examined change over hours and days,
47 whereas cross-sectional designs tap into change over years. The latter offers more opportunities
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3 for practice, understood to be a key driver for automatization, whereas shorter-term yet
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5 longitudinal (within-subject) data may reflect earlier stages in skill acquisition: knowledge
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7 creation and/or restructuring, as in proceduralization.
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10 To our knowledge, no previous research has used CV signatures following different types
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12 of pre-practice EI to interpret the effects of L2 instruction during practice. One advantage of this
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14 design is that we can explore the extent to which CV variability might index creation and/or
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16 restructuring of knowledge that is indicative of proceduralization, as suggested by Solovyeva and
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18 DeKeyser (2017). Solovyeva and DeKeyser's proposal, however, is based on evidence about
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20 lexical processing in a novel language. Lim and Godfroid (2015) suggest that CV might better
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22 explain lexical processing efficiency because lexical processing tends to rely more heavily on
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24 lower level processes (e.g., lexical access), whereas sentence-level/(morpho)syntactic processing
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26 tends to require higher level and multi-layered processes, including, for example, lexical access,
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28 inferencing, using background information, building a text model (see also Grabe & Stoller
29
30 2013). It is possible that CV changes might be more detectable when processing involves fewer
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32 component processes (as in lexical processing, for example). Although it has been argued that
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34 CV changes (with no clear trajectory) might represent signatures of change in the nature of
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36 lexical knowledge, the extent to which such CV changes might apply to morphosyntax remains
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38 an empirical question.
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44 In sum, the current study addresses the following gaps: First, unlike both Cornillie et al.
45
46 (2017) and DeKeyser (1997) whose learners all received the *same pre-practice* EI about the L2,
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48 we compared the effects of different types of pre-practice EI (that is, about the L2-only versus
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50 the L2+L1) on behaviour during practice. Second, participants were authentic classroom learners
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52 of L2 French, thus contrasting with previous investigations of longitudinal development during
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3 practice with (semi-)artificial languages in lab-based settings (but see Cornillie et al.). Third, our
4 instruction focused on the meaning(s) of the grammatical feature under investigation (in contrast
5 to Cornillie et al.). Fourth, we provided extensive practice with many opportunities for
6 proceduralization. Fifth, we examined learners' item-by-item, longitudinal performance during
7 each practice session, thus offering a detailed picture of accuracy and RT trajectories. In these
8 ways, we extend the agenda on using CV as an index of knowledge restructuring and
9 automatization involving morphosyntax.
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21 RESEARCH QUESTIONS

22 This study examined whether the type of EI (L2-only and L2+L1) provided before practice
23 moderated the accuracy and speed of responses during practice. Faster response speeds, as
24 evidenced by decreasing RTs, were further examined using CV to distinguish between speeded-
25 up and automatic performance. We sought to address the following research questions:
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- 32 • To what extent do the accuracy and speed of responses change over time with
33 increasing amounts of L2 practice?
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- 35 • Compared to L2-only EI + practice, to what extent do the accuracy and speed of
36 responses change when undertaking additional L1 practice with and without L1
37 EI?
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47 METHOD

48 *Participants*

49 Participants were 53 university learners of French as a foreign language in semester two of a
50 four-year bachelor of arts honours degree in French. All participants were L1 English speakers,
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3 aged 18-21, had completed A2-level French (English high school leaving qualification,
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5 equivalent to 700 to 800 hours of instruction), and had not spent more than six weeks abroad in a
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7 French-speaking country. Mean years of learning French was 10.3 (SD=2.7) and the mean time
8
9 spent abroad in a French-speaking country was 3.3 weeks (SD=6.07). Advanced-level learners
10
11 were recruited because our target feature, French *Imparfait*, is acquired late, typically not taught
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13 in beginning language classes, and is absent among beginners (Bartning & Schlyter, 2004).
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15 Furthermore, in order to examine the extent to which different types of EI plus practice can
16
17 improve learners' knowledge of *Imparfait*'s form-meaning mappings, our design required
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19 previous knowledge of IMP's inflectional forms, but not its full set of form-meaning mappings
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21 (as was confirmed by Pretest performance¹).
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28 *Target feature: French Imparfait*

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30 The target feature was French *Imparfait* (IMP) verbal morphology, a past tense form used to
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32 express past habituality and ongoingness (e.g., *il jouait au foot* - 'he used to play/was playing
33
34 football'). This feature was selected because SLA research has repeatedly shown its full set of
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36 functions are late-acquired due to functional complexity, including complex L1-L2 form-
37
38 meaning mapping differences (see Bartning & Schlyter, 2004; Howard, 2005; McManus, 2013,
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40 2015). All exemplars of IMP were third-person singular forms: 25 regular (e.g., *jouait* 'play')
41
42 and 23 irregular (e.g., *finissait* 'finish') verb types balanced across 48 lexical verb types: twelve
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44 states (e.g., be happy), twelve activities (e.g., run in the park), twelve accomplishments (e.g.,
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46 walk to the shop) and twelve achievements (e.g., arrive home). For stimuli examples, see
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51 Appendix B and IRIS (www.iris-database.org).
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3 *Study design*
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5 Three instructional treatments were implemented: L2 EI + L2 practice (L2-only, hereafter); L2
6 EI + L2 practice + L1 EI + L1 practice (L2+L1, hereafter); L2 EI + L2 practice + L1 practice
7 (L2+L1prac, hereafter). Participants were randomly assigned to one of these treatments, which
8 were administered one-to-one with laptops using E-Prime 2.0 and delivered in four 45-minute
9 sessions over three weeks, totalling 3.5 hours. All data for all treatment groups were collected by
10 the first author.
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19 Sessions one and two were delivered in week two, session three in week three, and
20 session four in week four. There were approximately three days between each session and
21 spacing was the same for each treatment group. In addition, spacing between the final treatment
22 session and the Posttest and Delayed Posttests were almost identical across all treatment groups.
23 (See Suzuki, 2017, for a discussion of the potential effects of different distributions of practice
24 and of different ratios of inter-practice and practice-test spacing. As our treatment groups
25 experienced similar spacing, we attempted to control for such effects).
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35 Each session had a different instructional focus on morphemic contrasts expressed by
36 IMP: Session one, ongoingness in the past (IMP) vs. present (Present tense); Session two,
37 habituality in the past (IMP) vs. present (Present tense); Session three, past ongoingness (IMP)
38 vs. past habituality (IMP); Session four, past ongoingness (IMP) vs. past habituality (IMP) vs.
39 past perfectivity (Passé Composé). Critically, sessions one and two presented information that
40 was new (i.e., within the experiment), session three combined information that had already been
41 experienced in sessions one and two, and session four included information that had been
42 experienced in all three previous sessions. All materials are available on IRIS.
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3 *Instructional treatments*

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5 For all three groups (L2-only, L2+L1, L2+L1prac), treatments included an identical core of EI
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7 about French *IMP* and practice interpreting it. We first describe this common core, before
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9 describing the additional L1 treatments. Table 1 summarizes the different instructional
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11 components received by each treatment group.
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17 *EI about L2.* Pre-practice EI was first provided for approximately five minutes at the start of
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19 each session and depicted conceptual-semantic information using a short video, image, or sound
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21 file of events. Ongoingness in present versus past was the instructional focus in session one, for
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23 example. Ongoingness was depicted using a ten second video of a man eating an apple, in which
24
25 the apple was never fully eaten. Learners were then asked to think about how they would
26
27 describe what they just saw in the video (e.g., he is eating an apple). Then the appropriate L2
28
29 aural and written forms were presented, and information given about how to interpret their
30
31 meaning. For example, French verb endings can be used to distinguish between past ongoingness
32
33 and present ongoingness (e.g., *il jouait* – Past IMP, *il joue* – Present tense), and so
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35 watching/listening out for verb endings can be helpful to distinguish ongoingness in the past vs.
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37 present in French. See Appendix C for description of EI used in session one.
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44 *Practice in L2.* Pre-practice EI was immediately followed by practice in listening and reading
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46 that forced learners to attend to form-meaning mappings expressed by *IMP*, *Passé Composé* or
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48 *Présent* (see VanPatten 2002 for referential activities in Processing Instruction, and Marsden
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50 2006 on using inflections to interpret tense). Learners selected the stimulus's meaning from two
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52 options in sessions one to three and three options in session four. The L2 practice contained 552
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Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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3 exemplars (96 in each of sessions one and two, 144 in session three, and 216 in session four),
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5 that were randomly ordered within each session for different participants; each verb type
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7 occurred eight times with *IMP* ($n = 384$), counterbalanced across listening/reading and
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9 ongoing/habitual². All learners completed the same amounts of L2 practice across all treatments,
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11 though the items within each practice session were presented randomly by E-Prime. See
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13 Appendix A for frequencies of French stimuli and examples. Stimuli were single clause in
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15 sessions one and two (e.g., *Il court dans la rue* ‘he is running in the street). To practice
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17 interpreting *IMP*’s habituality or ongoingness by relying, critically, on the inflectional
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19 morphemes in the broader discourse context, two clause stimuli were necessary in sessions three
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21 and four (e.g., *Elle mangeait un sandwich quand la cloche a sonné* (‘She was eating a sandwich
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23 when the bell rang’). An image (e.g., sandwich) plus a bracketed infinitive (e.g., *manger* ‘eat’)
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25 appeared alongside two-clause stimuli so that learners knew which verb to interpret. The
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27 stimulus appeared first (e.g., *jouait au foot quand sa petite amie est arrivee* ‘was playing football
28
29 when his girlfriend arrived’), then after 2500ms (for two-clause stimuli) and 500ms (for single-
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31 clause stimuli) the response options appeared and stayed on screen until a response was pressed.
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33 For aural stimuli, the response options did not appear until after the full stimuli had played. Thus,
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35 for all practice items, responses were not time pressured. Responses could not be changed after
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37 initial selection.
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44 Correct/incorrect feedback was shown immediately after each response. Additional EI
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46 was provided during the practice following incorrect responses only, which, as Appendix A,
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48 Table A2, shows, was infrequent and occurred in very (statistically) similar amounts in all
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50 treatments.
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3 *L2+L1 treatment.* In addition to EI about L2 and practice in L2, the L2+L1 treatment included
4 *pre-practice EI about the L1* (how English expresses the meanings taught in each session, e.g.
5 ongoingness in session one) as well as practice interpreting L1 forms expressing those same
6 meanings (e.g., present versus past progressive in session one). The design of the L1 EI and L1
7 practice followed the exact same design principles as outlined above for L2 EI and L2 practice.
8 See Appendix C for description of L1 EI used in session one, and Table A3, for frequencies of
9 English stimuli³.

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19 As above, correct/incorrect feedback was shown after each response. Following incorrect
20 responses only, additional EI was given⁴.

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26 *L2+L1prac treatment.* The L2+L1prac treatment included L2 EI and L2 practice (as in L2-only
27 and L2+L1 treatments) plus L1 practice. No EI about the L1 was provided, either pre-practice or
28 during the practice.
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42 *Data analysis*

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44 E-Prime collected accuracy and RT data for every response. For accuracy, responses
45 were coded as correct (1) or incorrect (0). Reliability coefficients for accuracy, calculated using
46 the Kuder-Richardson Formula 20, were: Session one (.91), Session two (.87), Session three
47 (.73), and Session four (.79)⁵. RTs were calculated in milliseconds from the onset of response
48 options to response selection. We analyzed raw RT data, trimmed in line with Keating &
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Jegerski's (2015) recommendations, removing RTs less than 150ms and greater than 2,000ms.

RT. Verbs were coded verbs as irregular (0) or regular (1).

Accuracy and RT were analysed separately. Also, separate analyses were conducted for each session because each had a different instructional focus (as previously described) and not all sessions included the same number of practice items. For accuracy, we conducted logit mixed-effects analyses (Jaeger, 2008) using the *lme4* package (Bates, Maechler, Bolker, & Walker, 2015). For RT, we conducted mixed-effects linear regression analyses (Baayen, Davidson, & Bates 2008) using *nlme* (Pinheiro, Bate, DebRoy, Sarkar, & R Core Team, 2018). For both accuracy and RT analyses, explanatory variables were as follows: Group (L2+L1, L2+L1prac, L2-only); Item (i.e. ranked practice item number); and Verb (regular, irregular). These were entered into the models as fixed effects. Subject and items were added as cross-random factors.

In contrast to ANOVAs, mixed-effects analyses avoid violating the assumption of independence because they model relationships between observations, an important consideration for our longitudinal analyses (Field, Miles, & Field 2012; Murakami 2016). Indeed, mixed-effects models offer many other advantages over ANOVAs, including greater flexibility of data distribution (e.g., binomial variables) and robustness against violations of homoscedasticity and sphericity. This makes them particularly useful for longitudinal research and more desirable for our analyses (Linck & Cunnings 2015; Cunnings & Finlayson 2015).

For each session, multiple models were constructed and the most plausible model was found through comparison. We started with the simplest model, with new parameters added to the model one at time (Field et al. 2012; Murakami 2016). We compared models as they were built using maximum-likelihood estimation (Field et al. 2012).

Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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3 First, we fitted a base-line model in which we included only the intercept, then we fitted a
4 model that allowed the intercept to vary over Subjects. Finally, to verify whether allowing the
5 intercepts to vary improved the model fit significantly, we compared the models using AIC
6 (Akaike Information Criterion) and the *anova* function. The final models were then built by
7 adding Group, Item, and Verb as fixed-effect factors, followed by a random slope added for the
8 effect of Item (thus allowing the effect of Item to vary across Subjects, because items were
9 randomly ordered within each session for each participant), and then a Group x Item fixed-effect
10 interaction. After adding each new parameter to the model, we verified whether its addition
11 significantly improved the fit of the model (using AIC and *anova*, see Table 2 accuracy and
12 Table 3 for RT). A parameter was only retained in the optimal model if its addition significantly
13 decreased the AIC value (see Cunnings & Finlayson, 2015; Field et al. 2012). For example, the
14 Verb parameter in Sessions 1-3 for RT did not significantly improve the final model, but its
15 removal did. As a result, our optimal models in Sessions 1-3 for RT excluded the Verb
16 parameter.

17
18
19 Because each optimal model contained three treatment groups, Group x Item interactions
20 were further explored using *lme4* (for accuracy) and *nlme* (for RT) for each Group (equivalent to
21 posthoc testing, see Field et al. 2012), thus allowing further examination of treatment effects on
22 performance over time.

23
24 For RTs that significantly quickened over time in each session, we calculated the
25 Coefficient of Variation (CV, mean SD divided by mean RT). As done by Hulstijn et al. (2009),
26 Lim and Godfroid (2015), and Suzuki and Sunada (2018), data for our CV analyses included
27 RTs for correct responses only, and excluded (a) incorrect responses, to reduce potential
28 confounds between processing speed and accuracy of linguistic knowledge, and (b) extremely
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Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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3 slow RTs of more than three SD above the mean, to exclude potentially invalid data. This
4
5 procedure removed 3272 data points (11.3% of the data). Simple linear regression analyses were
6
7 used to model the nature and size of the relationship between CV (outcome variable) and ranked
8
9 item number (predictor variable). Linearity was examined using scatterplots, which showed
10
11 linear distribution of the data.
12
13

14
15 For all analyses, the alpha was set at .05. To interpret effect estimates and magnitudes of
16
17 change, we present 95% CIs and R^2 effect sizes. CIs that do not pass through zero can be
18
19 considered reliable indicators of change. Like other standardized effect size statistics, R^2 can be
20
21 used as a summary index for statistical models to evaluate model fit, compare magnitudes of
22
23 effect across studies, and can be used for meta-analysis (Nakagawa and Schielzeth, 2013). R^2
24
25 values range from 0-1 and are used to estimate how much of the variance in performance
26
27 (accuracy, RT, and CV) can be accounted for by Group, Item (ranked item number), and Verb
28
29 (ir/regularity), individually and collectively (see Plonsky & Oswald 2017). We report R^2 values
30
31 for all fixed effects (marginal R^2), computed using the *MuMIn* package (Bartoň 2018). R^2 values
32
33 around .18, .32, and .51 are interpreted as small, medium, and large, respectively, in terms of the
34
35 explained variance they represent (Plonsky & Ghanbar, submitted).
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42 [Table 2]

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44 [Table 3]

45 46 47 48 49 RESULTS

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51 Results are presented separately for accuracy and RT. CV analyses are used to interpret RTs that
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53 reduced over time.
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Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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6 *Accuracy*

7
8 Table 4 shows the effects of the fixed factors and the interaction between treatment group and
9
10 ranked item number for accuracy in all practice sessions (see also Figure 1 for corresponding
11
12 plots with 95% CI shading).
13

14
15 Verb regularity did not significantly influence the accuracy of learners' performance in
16
17 any practice session ($p > .05$, all CIs passed through zero). Group, item number, and the
18
19 interaction between group and item number, however, were all statistically significant (with CIs
20
21 that did not pass through zero), indicating that group and item number both individually and
22
23 together significantly influenced the accuracy of learners' performance over time.
24

25
26 Posthocs tests examining each group's performance over time indicated that the
27
28 L2+L1group's accuracy improved significantly over time in all four practice sessions (session
29
30 one, $b = .07$ [95% CI: .03, .09], $z = 4.54$, $p < .001$, $R^2 = .03$; session two, $b = .05$ [95% CI: .02,
31
32 .08], $z = 3.24$, $p = .001$, $R^2 = .04$; session three, $b = .04$ [95% CI: .03, .05], $z = 5.85$, $p < .001$, R^2
33
34 $= .04$; session four, $b = .02$ [95% CI: .01, .02], $z = 7.48$, $p < .001$, $R^2 = .08$). Growing R^2 values
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36 over the four practice sessions additionally indicated that practice explained more of the variance
37
38 in performance in session four than any of the previous sessions.
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41
42 In contrast, we found that accuracy did not significantly improve over time for the
43
44 L2+L1prac and L2-only groups. For L2+L1prac, accuracy worsened slightly but significantly
45
46 over time in Session four ($b = -.00$ [95% CI: -.01, -.00], $z = -2.32$, $p = .02$, $R^2 = .01$), but not in
47
48 the other practice sessions (session one, $b = -.01$ [95% CI: -.01, .03], $z = -1.68$, $p = .09$, $R^2 = .00$;
49
50 session two, $b = -.01$ [95% CI: -.03, .01], $z = -1.15$, $p = .25$, $R^2 = .01$; session three, $b = -.00$
51
52 [95% CI: -.00, .01], $z = .77$, $p = .44$, $R^2 = .01$). Results for the L2-only group showed no change
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Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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3 over time for accuracy in any of the sessions (session one, $b = .01$ [95% CI: $-.01, .04$], $z = 1.09$, p
4 $= .27$, $R^2 = .01$; session two, $b = -.01$ [95% CI: $-.03, .02$], $z = -.54$, $p = .59$, $R^2 = .01$; session
5
6 three, $b = .00$ [95% CI: $-.01, .01$], $z = .82$, $p = .41$, $R^2 = .01$; session four, $b = .00$ [95% CI: $-.01,$
7
8 $.00$], $z = .06$, $p = .95$, $R^2 = .02$). All CIs for L2+L1prac and L2-only either passed through zero
9
10 and/or included zero. These were also few changes in R^2 values over time, indicating that
11
12 increasing amounts of practice contributed little to explaining performance, thus contrasting with
13
14 the patterning of results found for L2+L1.
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19 Taken together, these results indicate that only the L2+L1 group's accuracy over time
20 significantly improved with increasing amounts of practice. We found no such evidence for the
21
22 L2+L1prac and L2-only groups. These learning trajectories are visualized in Figure 1.
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28 [Table 4 here]

29 [Figure 1 here]

30 31 32 33 34 *Reaction times*

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36 Table 5 shows the effects of the fixed factors and the interaction between treatment group and
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38 ranked item number for RT in all practice sessions (see also Figure 2 for corresponding plots
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40 with 95% CI shading).
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42

43 As previously mentioned, the addition of a fixed main effect for Verb in sessions one,
44
45 two, and three did not lead to an improvement of model fit (see Table 3), indicating that verb
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47 regularity did not significantly influence the speed of learners' performance in these sessions. In
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49 session four, however, verb regularity significantly influenced the speed of learners'
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51 performance ($p < .05$, CIs did not pass through zero). Although posthoc tests showed
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53 significantly slower performance on irregular than regular verbs for L2+L1prac ($b = -113.81$
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Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

[95% CI: -184.62, -43.00], $t(4083) = -3.15$, $p = .002$, $R^2 = .09$) and L2-only ($b = -75.97$ [95% CI: -151.53, -.41], $t(3653) = -1.97$, $p = .05$, $R^2 = .04$), verb regularity only explained a very small proportion of the variance. In the L2+L1 group, however, we found no differences between irregular and regular verbs ($b = -14.89$ [95% CI: -75.06, 45.28], $t(3653) = -.49$, $p = .63$, $R^2 = .04$).

Group, item number, and the interaction between group and item number, however, were all statistically significant (with CIs that did not pass through zero), indicating that group and item number both individually and together significantly influenced the accuracy of learners' performance over time.

Posthocs tests examining each group's performance over time indicated that the L2+L1 group's speed of performance got significantly faster over time in all four practice sessions (Session 1, $b = -10.27$ [95% CI: -12.12, -8.27], $t(1614) = -10.96$, $p < .001$, $R^2 = .13$; Session 2, $b = -9.61$ [95% CI: -12.09, -7.13], $t(1614) = -7.58$, $p < .001$, $R^2 = .12$; Session 3, $b = -8.37$ [95% CI: -9.56, -7.18], $t(2430) = -13.74$, $p < .001$, $R^2 = .20$; Session 4, $b = -6.59$ [95% CI: -7.73 -5.47], $t(3653) = -11.48$, $p < .001$, $R^2 = .32$). Growing R^2 values over the four practice sessions additionally indicated that practice explained more of the variance in performance in session four than any of the previous sessions, similar to our findings for accuracy, albeit with larger R^2 values (e.g. session four R^2 values were .08 for accuracy, but .32 for RT).

In contrast, we found that L2+L1prac's tended not to change significantly over time, except in session three when RTs got significantly faster over time ($b = -1.92$ [95% CI: -3.05, -.80], $t(2716) = -3.36$, $p < .001$, $R^2 = .02$), but we found no significant change in the other sessions (Session 1, $b = -.44$ [95%CI: -2.61, 1.73], $t(1804) = -.39$, $p = .69$, $R^2 = .06$; Session 2, $b = -.20$ [95% CI: -3.04, 2.63], $t(94) = -.14$, $p = .89$, $R^2 = .01$; Session 4, $b = -.51$ [95% CI: -2.02,

Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

.99], $t(4083) = -66, p = .51, R^2 = .09$). Except in session three, CIs passed through zero.

Similarly, L2-only's speed of performance did not change significantly over time (Session 1, $b = .38$ [95%CI: -2.75, 3.50], $t(1614) = .24, p = .81, R^2 = .09$; Session 2, $b = -.08$ [95% CI: -3.50, 3.34], $t(1614) = -.05, p = .96, R^2 = .02$; Session 3, $b = -.75$ [95% CI: -3.19, 1.70], $t(2287) = -.59, p = .55, R^2 = .07$; Session 4, $b = -1.23$ [95% CI: -2.62, .15], $t(3653) = -1.75, p = .08, R^2 = .04$). CIs in all sessions passed through zero, and there was no clear trajectory of R^2 values.

Consistent with our results for accuracy, fixed main effects for group, item number, and the interaction between group and item number were all statistically significant in all four Sessions ($p < .05$, CIs did not pass through zero), suggesting that group and item number, both individually and together, significantly influenced the speed of learners' performance over time. Exclusively in session four, verb regularity significantly influenced L2+L1prac's and L2-only's reaction times, in that they were slower at giving responses to irregular than regular verbs. Verb regularity did not influence L2+L1's performance. In sum, therefore, the L2+L1 group's performance over time significantly improved as a function of the practice. We found no such evidence for the L2-only group. L2+L1prac's RT got faster over time in session three, but there were no changes in sessions one, two and four. Practice explained a medium-sized proportion of the variance in Session 4 for the L2+L1group. These learning trajectories are visualized in Figure 2.

[Table 5 here]

[Figure 2 here]

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Coefficient of Variation

Because only L2+L1's RTs decreased significantly over time, we present CV analyses to interpret the faster RTs in this treatment group (for summary, see Figure 2). Recall, CV scores that increase, remain broadly constant, or are variable over time have traditionally been argued to indicate speed-up or they may indicate, as argued more recently by Solovyeva & DeKeyser (2017) in relation to novel word learning, knowledge creation and/or restructuring. CV scores that gradually decrease over time are thought to indicate qualitative changes in processing efficiency and stability, indicative of automatization, a process driven by practice.

In order to ascertain the extent to which CV scores significantly reduced over time, linear regressions were calculated to predict CV scores based on item number (see Table 6). Results showed that CV scores in sessions one and two were variable over time, with CV trajectories over time that were broadly bell shaped (session one) or "S" shaped (session two). Ranked item number was not a significant predictor of CV scores in session one ($R^2 = .00$). In session two, however, ranked item number was a significant predictor of increasing CV scores ($R^2 = .09$).

In sessions three and four, reductions in CV appear more visible (see Figure 3). Linear regression results in these sessions showed that ranked item number significantly predicted reducing CV scores (session three, $R^2 = .25$; session four, $R^2 = .32$). In other words, CV scores reduced with increasing amounts of practice. Increasing R^2 values indicate that item number explained more of the variance in Session 4 than in Session 3, and in both sessions practice explained a medium-sized proportion of the variance.

In sum, CVs in sessions one and two appeared variable or changed little over time (small R^2 value in session two), and only appeared to visibly and reliably decrease over time in sessions three and four (medium R^2 values). These results suggest that processing efficiency and stability,

Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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3 indicative of automatization, was not evident in the earlier sessions and was only observable in
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5 the last two practice sessions.
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10 [Table 6 here]

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12 [Figure 3 here]
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17 DISCUSSION

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19 We examined whether EI about the L1 and/or practice in interpreting the L1 affected the
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21 accuracy and speed of learners' responses during L2 practice, in comparison to receiving only
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23 instruction about the L2 (EI and practice). All groups received the same L2 instruction. We
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25 examined fine-grained item-by-item performance over time for accuracy and RT over the course
26
27 of four practice sessions.
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31 Results showed that increasing amounts of practice led to more accurate and faster
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33 performance in the group that received L1 EI (L2+L1), but not in the groups that did not
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35 (L2+L1prac, L2-only).
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38 Since all groups received the same L2 EI and practice, these results indicate that L2
39
40 practice alone did not lead to the differences observed. This contrasts with the findings of
41
42 Cornillie et al. (2017) and DeKeyser (1997), where automatization effects were detected after L2
43
44 explicit instruction. However, different study designs may explain the difference in our results
45
46 compared with those from previous research. First, Cornillie et al. provided larger amounts of
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48 corrective feedback (yes/no plus EI). Second, DeKeyser's practice was distributed over a longer
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50 period of time (his fifteen weeks vs. our three weeks). Third, the L1 EI and practice may have
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52 been necessary in our study. That is, since neither Cornillie et al. nor DeKeyser focused on
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Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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3 crosslinguistically complex form-meaning mappings, additional L1 EI may have been necessary
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5 for our target feature (*IMP*) due to its crosslinguistic complexity. In particular, it may have been
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7 necessary to elicit subtle changes among these upper intermediate-advanced learners who were
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9 already relatively accurate, at least in terms of the target form (but not its form-meaning
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11 mappings).
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15 Although our plots showing performance over time showed initially lower accuracy and
16
17 slower RTs for L2+L1 than the other groups in each session, L2+L1's performance significantly
18
19 improved with practice. These trajectories indicate that L1 EI (received only by the L2+L1
20
21 group) created a delayed advantage: performance was initially less accurate and slower but
22
23 increasing amounts of practice led to more accurate and faster performance than in the groups
24
25 without L1 EI.
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29 We used CVs to interpret L2+L1's faster RTs over time. CVs appeared variable during
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31 sessions one and two and decreased during sessions three and four. Recall also that sessions one
32
33 and two presented and practiced information that was new for the participants (within the context
34
35 of this experiment), and sessions three and four revisited this information through different
36
37 configurations of practice. Solovyeva and DeKeyser (2017) proposed two interpretations for CV
38
39 change. First, knowledge creation and/or restructuring is reflected in CV variability (with no
40
41 clear *direction*) because new (sub)processes are added to existing processing routines (see also
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43 Brown & Gaskell, 2014; Suzuki, 2017). Second, automatization of established/existing
44
45 knowledge results in *decreasing* CVs due to the elimination and/or restructuring of inefficient
46
47 processing routines (see also Hulstijn et al., 2009; Lim & Godfroid, 2014). Solovyeva and
48
49 DeKeyser's (2017) proposals repurposed CV, when observed in different patterns, as an
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51 indicator both of learning in the *earlier* stages in skill acquisition (where declarative knowledge
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Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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3 is established and incorporated into existing knowledge, as it is proceduralized), as well as of the
4
5 *later* stages of automatization. Although, to our knowledge, no previous research has used CVs
6
7 to examine the effects of different types of pre-practice EI on L2 performance during practice,
8
9 Solovyeva and DeKeyser's (2017) hypothesis helps explain our observed trajectories.
10
11

12 First, CV variability (i.e., CV increases and decreases with no clear trajectories), as found
13
14 in sessions one and two, in particular, suggests the restructuring of existing L2 knowledge
15
16 through the addition of new processes and/or representations (Solovyeva & DeKeyser 2017). In
17
18 our case, pre-practice EI about the L1 provided new information about form-meaning mappings
19
20 and processing routines for ongoingness and habituality. We suggest that CV variability was
21
22 underpinned by the integration of this EI about the L1 with existing L2 knowledge. This process,
23
24 we think, resulted in changes to the nature of the L2 knowledge and its processing, and these
25
26 changes introduced temporary instabilities into the L2 knowledge system (see Figure 3).
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30 Second, CV decreases in Sessions 3 and 4 appear compatible with automatization of
31
32 knowledge, due to the elimination of slower, less efficient processing procedures. Our results
33
34 indicate that reducing CVs only emerged after opportunities to undertake considerable practice
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36 (approximately 1.5 hours over two prior sessions, that introduced and rehearsed the same
37
38 information though in different types of practice items). Indeed, Session 4 contained the most
39
40 practice items, and rehearsed information that had already been presented and practiced in three
41
42 prior sessions, which could explain why we see clearer CV decreases because there were more
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44 opportunities for automatization to occur, both within the session and prior to it.
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49 These accuracy, RT, and CV results for performance during practice are consistent with
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51 McManus and Marsden's (2017a, 2017b) previously-discussed post-instruction findings at
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53 Posttest and Delayed Posttest, which showed that providing L1 EI with L1 practice alongside a
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Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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3 core of L2 EI with L2 practice (i.e., the L2+L1 treatment) improved the speed (on a self-paced
4 reading task) and accuracy (on a sentence judgement task in reading and listening) of L2
5
6 processing, immediately after instruction and with gains retained six weeks later. There were few
7
8 reliable learning benefits for groups that did not receive L1 EI as part of their instruction.
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11
12 Taken together, two trends emerge from the current study's findings and those for post-
13 instruction performance as reported by McManus and Marsden (2017a, 2017b). First,
14 performance during the practice was consistent with performance at both Posttest and Delayed
15 Posttest: learners whose performance improved during practice also showed improvement in the
16 outcome measures. Second, our findings indicate that improvement in the accuracy and speed of
17 L2 performance, both during the practice and post-instruction at the posttests, was found only for
18 learners whose treatment included EI about the L1 (i.e., the L2+L1 group). In other words, L2
19 practice by itself (without EI about the L1, and even if accompanied by practice in the L1), did
20 not improve the accuracy and speed of L2 performance, either during the practice or post-
21 instruction at the posttests.
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Learning processes during practice

40 Our results suggest that the L2+L1 treatment (additional L1 EI + L1 practice) played an
41 important role in improving the accuracy and speed of learners' responses during practice. We
42 think that L2+L1 EI was more effective than L2-only EI because it addressed the nature of the
43 crosslinguistic learning problem.
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49 Our CV results indicated qualitative changes in learners' processing, suggesting
50 reduction/elimination of inefficient sub-processes/components that are understood to be a cause
51 of processing variability (Segalowitz, 2010). Over time, systematic practice appeared to lead to
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Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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3 more efficient/stable processing, in line with our pedagogical aims. We speculate that CV
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5 variability in sessions one and two followed by CV reductions over time in sessions three and
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7 four reflected adjustment of prior processing routines. We further speculate that this constituted
8
9 moving away from routines that interpreted IMP via L1 processing routines, such as via a
10
11 constrained mapping of IMP to meanings expressed in the L1 by ‘BE(past) + ing’ or ‘used to +
12
13 verb’ or via lexical cues (e.g., adverbials) towards routines that more speedily and reliably
14
15 interpreted IMP using inflectional morphology elsewhere in the sentence as a reliable cue for
16
17 extracting habitual versus ongoing meaning. This would be consistent with some interpretations
18
19 that decreases in CV indicate greater processing stability and efficiency brought about by
20
21 extensive opportunities for practice (e.g., Solovyeva & DeKeyser, 2017; Suzuki, 2017).
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28 LIMITATIONS AND FUTURE RESEARCH

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30 Given our small sample sizes, we emphasize that our accounts are tentative. Also, our
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32 interpretations that variable CVs index knowledge creation and/or restructuring rest on a small
33
34 body of evidence and more research is needed to corroborate these interpretations. Nonetheless,
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36 this constitutes an important research agenda if we wish to understand the mechanisms
37
38 underpinning learning effects during practice and seek empirical support for skill acquisition
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40 accounts of learning L2s.
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44 We leave to future research the task of investigating how these signatures of automaticity
45
46 relate to comprehension and production performance *after* instruction. According to the post-
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48 practice performance results in McManus and Marsden (2017a, 2017b), it seems that
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50 performance on a controlled, interpretation outcome measure (self-paced reading test), even six
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52 weeks post-instruction, was in line with the during-practice trends observed in the current
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Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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3 analysis. That is, both the post- and during-instruction measures showed the most benefits for the
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5 group that received additional L1 EI plus practice.
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8 The current study provides evidence of benefits of L1 EI (combined with L1 practice, L2
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10 EI, and L2 practice) on L2 inflectional verb morphology with, specifically, crosslinguistically
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12 different form-meaning mappings. We saw that a CV signature of automatization was observable
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14 most clearly and reliably during a fourth training session (after 2.25 hours of training). Perhaps
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16 critically, this fourth session facilitated repetitive interpretation practice of the material
17
18 introduced in the previous three sessions. During those first three sessions, and particularly the
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20 first two, we observed evidence indicative of knowledge creation and/or restructuring. It remains
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22 to be determined how much practice is required for evidence of automatization to emerge,
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24 beyond a general speeding-up, for other features and L2 proficiencies.
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29 Our finding that additional L1 EI benefitted the learning of a crosslinguistically complex
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31 L2 feature provides some evidence of the usefulness of explicit L1 grammar teaching. For this
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33 target feature, L1 grammar teaching led to evidence of change in the nature of L2 knowledge and
34
35 the speed of access to it. Future research should investigate the extent to which L1 EI may
36
37 benefit the L2 learning of other linguistic features, but we think that L1 EI will perhaps be most
38
39 beneficial for L2 features that are sensitive to crosslinguistic influence at the level of form-
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41 meaning mapping (as determined by SLA research), especially for target-features that exhibit
42
43 L1-L2 form-meaning mapping differences like IMP for English-speakers. Other target features
44
45 could include L2 learning of (1) the *ser-estar* distinction in L2 Spanish and (2) *zai* in L2 Chinese
46
47 by English speakers. Similar to IMP, *ser-estar* and *zai* exhibit complex L1-L2 form-meaning
48
49 mapping differences: (1) the meaning expressed by a single form in the L1 (*be*) is expressed by
50
51 multiple forms in the L2 (*ser* and *estar*; see Silva-Corvalán 2014) or (2) the meaning expressed
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Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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3 by a single form in the L2 (*zai*) is expressed by multiple forms in the L1 (*progressive V+ing* and
4
5 *prepositional 'in'*, see Xiao & McEney 2004). Future research should also investigate the extent
6
7 to which the usefulness of L1 EI for L2 learning is mediated by age and L2 proficiency. These
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9 avenues would help tailor L2 instruction to the nature of the learning problem in different
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11 contexts.
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Notes

1. Baseline parity using Pretest scores was tested from the context-matching tests in listening and reading and a self-paced reading test. Baseline parity was found between all groups on all measures. For full reporting of these results, see McManus and Marsden (2017a, 2017b).
2. Aural stimuli were recorded by two native French speakers. The French sentences were verified for authenticity by 26 native French speakers: All were rated as 100% acceptable, with the meanings (ongoing/ habitual, present/past) as intended by the researchers.
3. Performance on L1 practice items is not analysed here as we were interested in the effects of different types of pre-practice EI on L2 learning during practice.
4. EI provided during practice provided information about L1 and L2 form-meaning mappings.
5. Based on a meta-analysis of reliability coefficients in L2 research, Plonsky and Derrick (2016) propose that .74 should be considered a general (not absolute) threshold for an acceptable estimate of instrument reliability.
6. Individual data points are not plotted due to the binary nature (0, 1) of the data coding

TABLES

Table 1.
Summary of instructional differences between the treatment groups

	L2+L1	L2+L1prac	L2-only
L2 practice	✓	✓	✓
L2 EI	✓	✓	✓
L1 practice	✓	✓	
L1 EI	✓		

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Table 2. Summary of logit mixed-effects model comparisons for accuracy

Session #	Model	Fixed Effects	Random Effects	AIC	Δ AIC	-2LL Statistic	p
1	Model 1	None	By-Subject random-intercepts	818.87			
	Model 2	Model 1 + Group	Same as Model 1	820.18	-407.09	$X^2(1) = .69$	.41
	Model 3	Model 2 + Item	Same as Model 1	796.91	-394.45	$X^2(1) = 25.27$	< .001
	Model 4	Same as Model 3	Model 1 + by-Item random slope	798.84	-393.42	$X^2(2) = 2.07$	.36
	Model 5	Same as Model 4 + Verb	Same as Model 4	800.12	-393.06	$X^2(1) = .72$	.39
	Model 6	Model 5 + Group x Item interaction	Same as Model 4	792.58	-388.29	$X^2(1) = 9.53$	.002
	Model 7	Model 4 + Group x Item interaction	Same as Model 4	791.28	-388.64	$X^2(1) = .69$	.40
2	Model 1	None	By-Subject random-intercepts	940.99	0468.50		
	Model 2	Model 1 + Group	Same as Model 1	942.58	-468.29	$X^2(1) = .41$	.52
	Model 3	Model 2 + Item	Same as Model 1	939.82	-465.91	$X^2(1) = 4.76$	.03
	Model 4	Same as Model 3	Model 1 + by-Item random slope	936.01	-462.01	$X^2(1) = 7.81$	.02
	Model 5	Same as Model 4 + Verb	Same as Model 4	937.60	-461.80	$X^2(1) = .41$	.52
	Model 6	Model 5 + Group x Item interaction	Same as Model 4	927.09	-455.55	$X^2(1) = 12.51$	< .001
	Model 7	Model 4 + Group x Item interaction	Same as Model 4	925.49	-455.49	$X^2(1) = .39$	.53
3	Model 1	None	By-Subject random-intercepts	1776.6	-886.30		
	Model 2	Model 1 + Group	Same as Model 1	1775.0	-884.51	$X^2(1) = 3.58$	.06
	Model 3	Model 2 + Item	Same as Model 1	1749.4	-860.70	$X^2(1) = 27.63$	< .001
	Model 4	Same as Model 3	Model 1 + by-Item random slope	1730.8	-859.38	$X^2(2) = 22.63$	< .001
	Model 5	Same as Model 4 + Verb	Same as Model 4	1731.8	-858.91	$X^2(1) = .95$	.33
	Model 6	Model 5 + Group x Item interaction	Same as Model 4	1717.1	-850.55	$X^2(1) = 16.71$	< .001
	Model 7	Model 4 + Group x Item interaction	Same as Model 4	1716.1	-851.04	$X^2(1) = .97$	.32
4	Model 1	None	By-Subject random-intercepts	5766.6	-2881.3		
	Model 2	Model 1 + Group	Same as Model 1	5767.9	-2881.0	$X^2(1) = .72$	.39
	Model 3	Model 2 + Item	Same as Model 1	5734.1	-2863.1	$X^2(1) = 35.80$	< .001
	Model 4	Same as Model 3	Model 1 + by-Item random slope	5623.1	-2805.6	$X^2(2) = 114.99$	< .001
	Model 5	Same as Model 4 + Verb	Same as Model 4	5624.5	-2805.2	$X^2(1) = .64$	.42
	Model 6	Model 5 + Group x Item interaction	Same as Model 4	5583.2	-2783.6	$X^2(1) = 43.31$	< .001
	Model 7	Model 4 + Group x Item interaction	Same as Model 4	5581.8	-2783.9	$X^2(1) = .66$	.42

Note. Grey shading indicates optimal model

Table 3.
Summary of mixed-effects linear model comparisons for RT

Session #	Model	Fixed Effects	Random Effects	AIC	Δ AIC	-2LL Statistic	<i>p</i>
1	Model 1	None	By-Subject random-intercepts	84395.91	-42194.96		
	Model 2	Model 1 + Group	Same as Model 1	84397.90	-42194.95	$X^2(1) = .01$	.91
	Model 3	Model 2 + Item	Same as Model 1	84352.44	-42171.22	$X^2(1) = 47.46$	<.001
	Model 4	Same as Model 3	Model 1 + by-Item random slope	84266.31	-42126.15	$X^2(2) = 90.14$	<.001
	Model 5	Same as Model 4 + Verb	Same as Model 4	84267.99	-42125.99	$X^2(1) = .32$	.57
	Model 6	Model 5 + Group x Item interaction	Same as Model 4	84249.91	-42115.96	$X^2(1) = 20.08$	<.001
	Model 7	Model 4 + Group x Item interaction	Same as Model 4	84248.22	-42116.11	$X^2(1) = 20.08$	<.001
2	Model 1	None	By-Subject random-intercepts	84161.99	-42077.99		
	Model 2	Model 1 + Group	Same as Model 1	84163.08	-42077.54	$X^2(1) = .91$	.34
	Model 3	Model 2 + Item	Same as Model 1	84140.87	-42065.44	$X^2(1) = 24.20$	<.001
	Model 4	Same as Model 3	Model 1 + by-Item random slope	84116.50	-42051.25	$X^2(2) = 28.38$	<.001
	Model 5	Same as Model 4 + Verb	Same as Model 4	84116.87	-42050.44	$X^2(1) = 1.62$	.20
	Model 6	Model 5 + Group x Item interaction	Same as Model 4	84103.17	-42042.59	$X^2(1) = 15.69$	<.001
	Model 7	Model 4 + Group x Item interaction	Same as Model 4	84102.8	-42043.40	$X^2(1) = .15.69$	<.001
3	Model 1	None	By-Subject random-intercepts	125492.0	-62743		
	Model 2	Model 1 + Group	Same as Model 1	125490.6	-62741.30	$X^2(1) = 3.39$	.07
	Model 3	Model 2 + Item	Same as Model 1	125331.9	-62660.94	$X^2(1) = 160.72$	<.001
	Model 4	Same as Model 3	Model 1 + by-Item random slope	125190.9	-62588.47	$X^2(2) = 144.93$	<.001
	Model 5	Same as Model 4 + Verb	Same as Model 4	125192	-62588.23	$X^2(1) = .49$	.48
	Model 6	Model 5 + Group x Item interaction	Same as Model 4	125176.1	-62579.05	$X^2(1) = 18.35$	<.001
	Model 7	Model 4 + Group x Item interaction	Same as Model 4	125174	-62579.29	$X^2(1) = 18.36$	<.001
4	Model 1	None	By-Subject random-intercepts	193608.5	-96801.23		
	Model 2	Model 1 + Group	Same as Model 1	193609.1	-96800.55	$X^2(1) = 1.37$	.24
	Model 3	Model 2 + Item	Same as Model 1	193357.0	-96673.51	$X^2(1) = 254.07$	<.001
	Model 4	Same as Model 3	Model 1 + by-Item random slope	192961.5	-96473.75	$X^2(1) = 399.53$	<.001
	Model 5	Same as Model 4 + Verb	Same as Model 4	192951.5	-96467.74	$X^2(1) = 12.02$	.001
	Model 6	Model 5 + Group x Item interaction	Same as Model 4	192927.6	-96454.78	$X^2(1) = 25.91$	<.001
	Model 7	Model 4 + Group x Item interaction	Same as Model 4	192937.5	-96460.76	$X^2(1) = 11.95$	.001

Note. Grey shading indicates optimal model

Table 4.
Summary of fixed effects for accuracy

Session #	Parameter	Estimate	95% CIs for Estimate	SE	z-value	<i>p</i>	<i>R</i> ²
1	(intercept)	2.13	1.15, 3.10	.49	4.28	< .001	.01
	Group	.49	.04, .94	.23	2.13	.03	.01
	Item	.07	.04, .09	.02	4.23	< .001	.01
	Verb	.19	-.26, .65	.23	.83	.40	.01
	Group X Item	-.02	-.03, -.01	.01	-3.12	.002	.01
2	(intercept)	2.34	1.05, 3.63	.66	3.56	< .001	.02
	Group	.74	.15, 1.32	.29	2.47	.01	.02
	Item	.05	.02, .08	.01	3.68	< .001	.02
	Verb	.13	-.28, .54	.21	.63	.53	.02
	Group X Item	.02	-.03, -.01	.01	-3.77	< .001	.02
3	(intercept)	2.15	1.32, 2.98	.42	5.07	< .001	.02
	Group	.46	.09, .84	.19	2.42	.02	.02
	Item	.04	.03, .06	.01	5.33	< .001	.02
	Verb	-.15	-.45, .15	.15	-.96	.34	.02
	Group X Item	-.01	-.02, -.01	.00	-4.13	< .001	.02
4	(intercept)	.45	-.06, .96	.26	1.73	.08	.04
	Group	.91	.67, 1.15	.12	7.42	< .001	.04
	Item	.02	.01, .20	.00	8.85	< .001	.04
	Verb	.06	-.02, .03	.07	.82	.41	.04
	Group X Item	-.01	-.01, -.01	.00	-7.9	< .001	.04

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Table 5.
Summary of fixed effects for RT

Session #	Parameter	Estimate	95% CIs for Estimate	SE	DF	t-value	<i>p</i>	<i>R</i> ²
1	(intercept)	1912.78	1660.43, 2165.14	128.77	5033	14.85	<.001	.09
	Group	-237.90	-355.49, -120.32	58.59	51	-4.06	<.001	.09
	Item	-13.13	-17.33, -8.94	2.14	5033	-6.14	<.001	.09
	Group X Item	4.81	2.90, 6.72	.97	5033	4.94	<.001	.09
2	(intercept)	1967.85	1700.78, 2234.91	136.28	4843	14.44	<.001	.03
	Group	-260.55	-387.28, -122.83	63.09	49	-4.13	<.001	.03
	Item	-12.70	-17.35, -8.06	2.37	4843	-5.36	<.001	.03
	Group X Item	4.70	2.55, 6.85	1.09	4843	4.28	<.001	.03
3	(intercept)	2353.70	2121.63, 2585.77	118.42	7434	19.88	<.001	.09
	Group	-298.57	-406.59, -190.56	53.79	50	-5.55	<.001	.10
	Item	-10.08	-12.97, -7.19	1.48	7434	-6.83	<.001	.09
	Group X Item	3.15	1.83, 4.46	.67	4.69	4.69	<.001	.09
4	(intercept)	2576.59	2307.74, 2845.43	137.18	11392	18.78	<.001	.11
	Group	-376.77	-501.73, -251.82	62.25	51	-6.05	<.001	.12
	Item	-8.82	-11.06, -6.58	1.14	11392	-7.72	<.001	.11
	Verb	-70.69	-110.76, -30.63	20.44	11392	-3.46	.001	.11
	Group X Item	3.00	1.99, 4.02	0.52	11392	5.78	<.001	.11

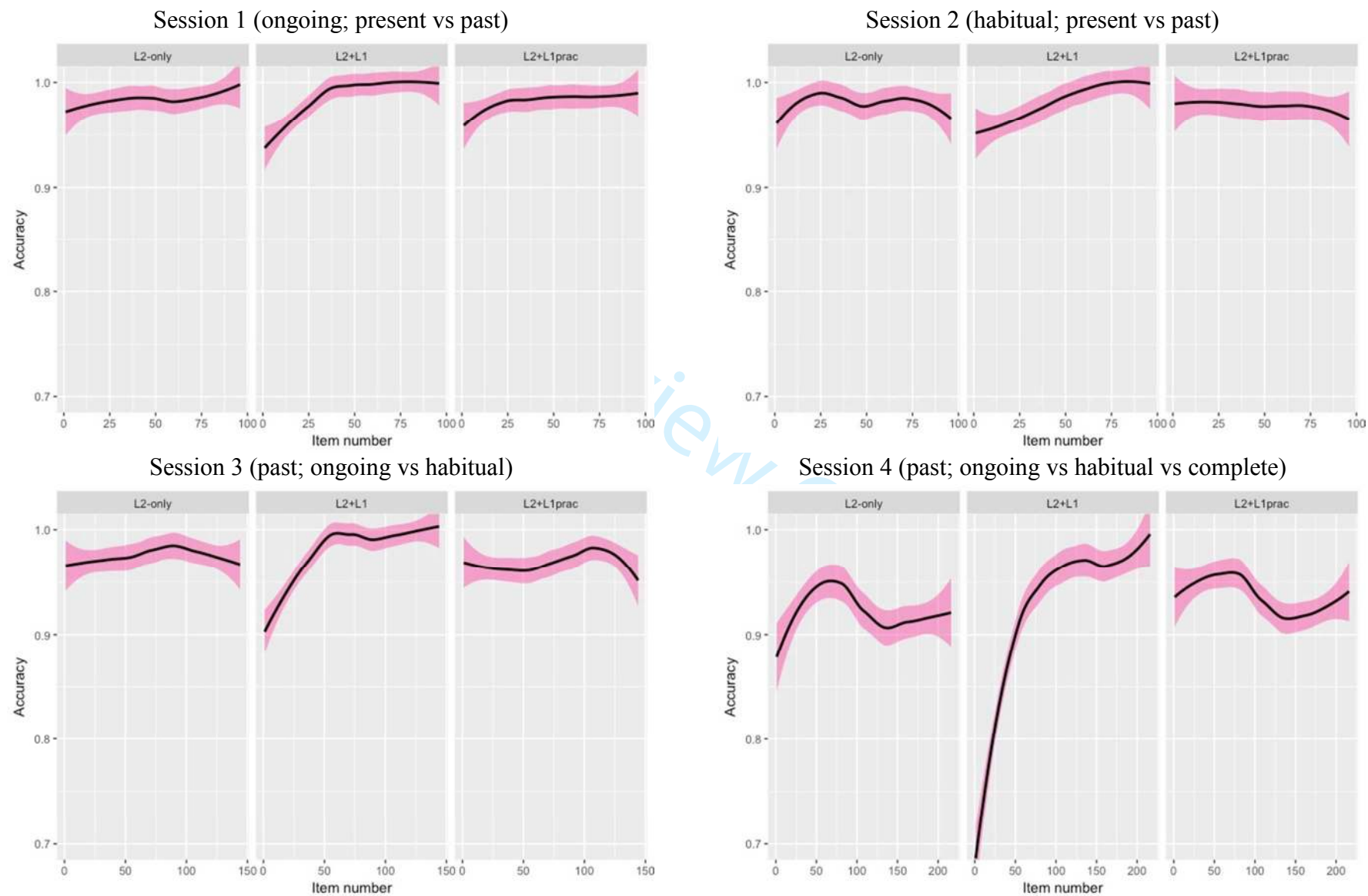
Table 6.
 Linear regression results for CV scores in each practice session

	Session 1	Session 2	Session 3	Session 4
Intercept	.64***	.61**	.71***	.74***
[95% CIs]	[.54, .75]	[.54, .67]	[.67, .75]	[.71, .77]
(SE)	(.05)	(.03)	(.02)	(.01)
Item	.000	.002**	-.001***	-.001***
[95% CIs]	[-.00, .00]	[.00, .00]	[-.00, .00]	[-.00, -.00]
(SE)	(.00)	(.00)	(.000)	(.00)
<i>F</i>	(1, 94) = .01	(1, 94) = 9.6	(1, 142) = 47.67	(1, 214) = 102
<i>p</i>	.91	.003	< .001	< .001
<i>R</i> ²	.00	.09	.25	.32

Note. *** = $p < .001$, ** = $p < .01$

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FIGURES

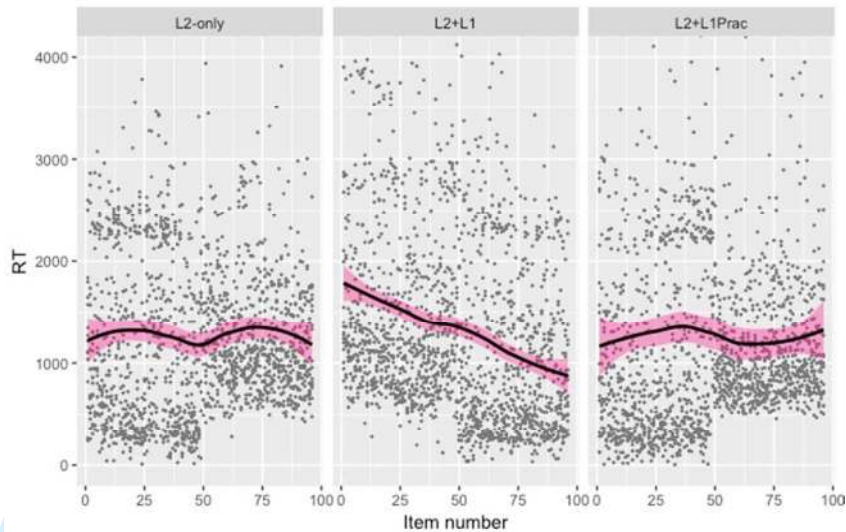
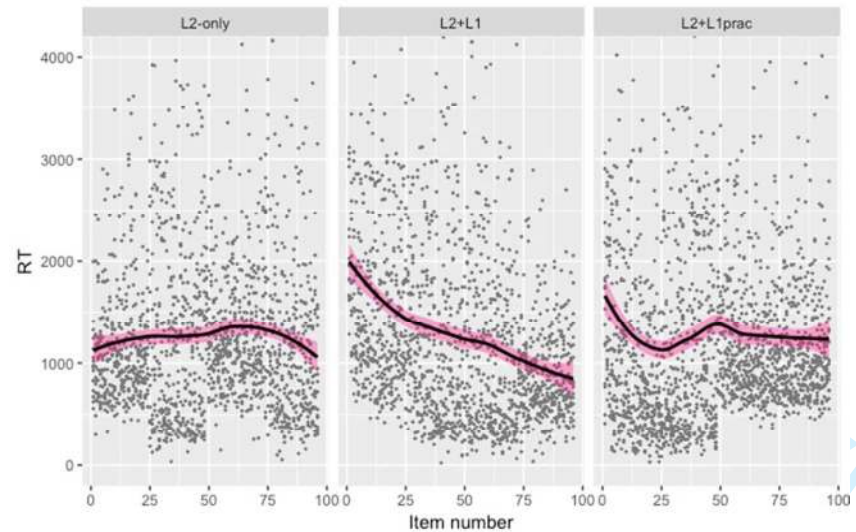
Figure 1. Accuracy scores over time in each training session (black line = regression line, pink shading = 95% CIs)⁶

FIGURES

Figure 2. Mean reaction times over time in each training session (black line = regression line, pink shading = 95% CIs, grey dots = individual data points)

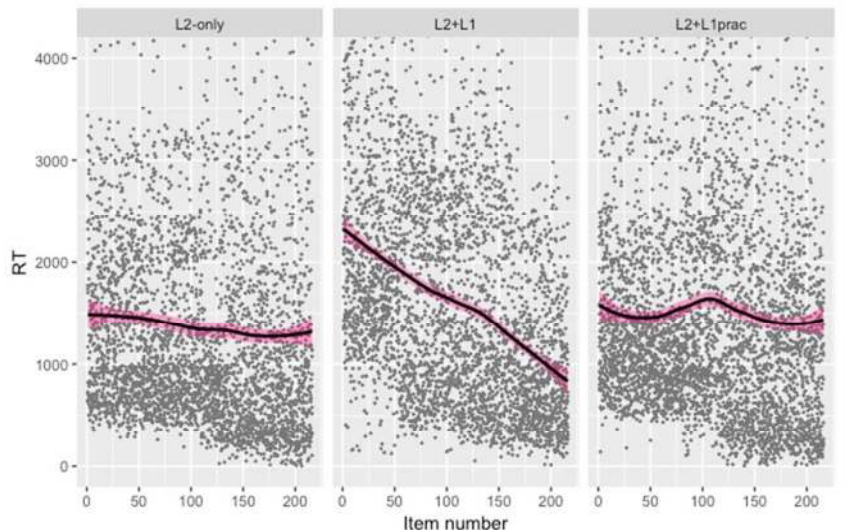
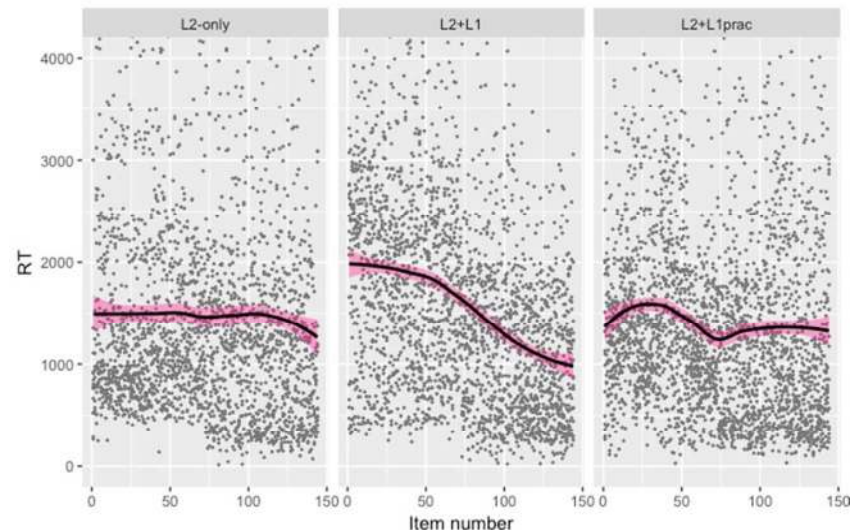
Session 1 (ongoing; present vs past)

Session 2 (habitual; present vs past)



Session 3 (past; ongoing vs habitual)

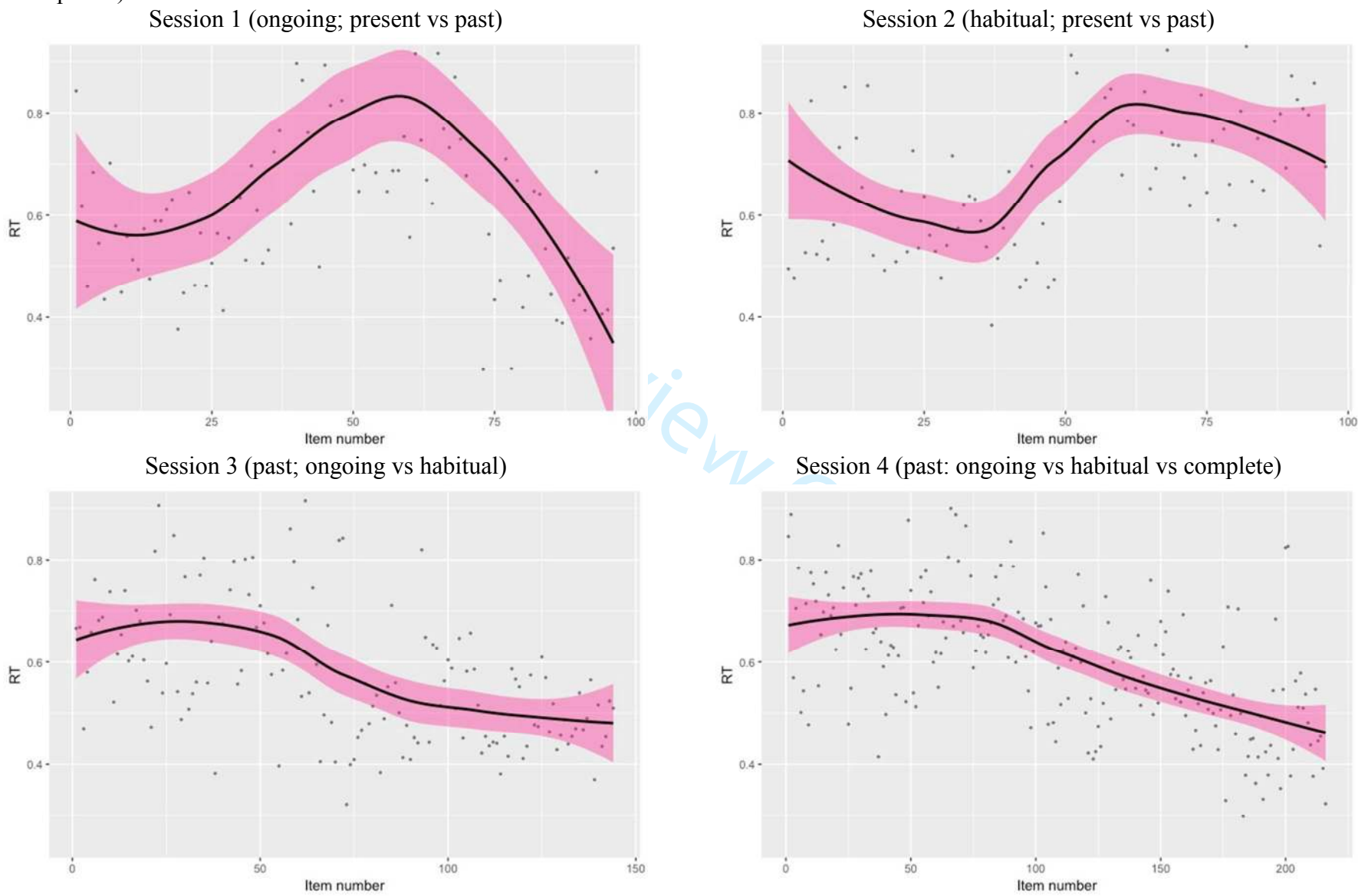
Session 4 (past; ongoing vs habitual vs complete)



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FIGURES

Figure 3. CVs over time for L2+L1 group in all sessions (black line = regression line, pink shading = 95% CIs, grey dots = individual data points)



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Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

APPENDIX A

Table A1.
Frequencies of French stimuli used all treatments

		Listening	Reading	Total
<i>IMP Ongoing/Interrupted</i>	Session 1	24	24	48
	Session 3	36	36	72
	Session 4	36	36	72
<i>IMP Habitual</i>	Session 2	24	24	48
	Session 3	36	36	72
	Session 4	36	36	72
TOTAL IMP		192	192	384
IMP juxtaposed with...				
	<i>Présent</i>	24	24	48
	<i>Présent</i>	24	24	48
	<i>Passé Composé</i>	36	36	72
GRAND TOTALS		276	276	552

Table A2.
Frequencies of EI received during training when selecting incorrect answers, by group

	L2+L1 (n=17)	L2-only (n=17)	L2+L1prac (n=19)
Session 1: Ongoingness, past vs. present			
After incorrectly responding 'MAINTENANT'	9	5	13
After incorrectly responding 'DANS LE PASSÉ'	8	10	10
Session 2: Habituality, past vs. present			
After incorrectly responding 'MAINTENANT'	23	21	29
After incorrectly responding 'DANS LE PASSÉ'	7	9	7
Session 3: Ongoing vs. Habitual, past only			
After incorrectly responding 'ONGOING / INTERRUPTED'	60	63	57
After incorrectly responding 'REGULARLY REPEATED'	25	28	26
Session 4: Ongoing vs. Habitual vs. Complete, past only			
After incorrectly responding 'ONGOING / INTERRUPTED'	111	111	108
After incorrectly responding 'REGULARLY REPEATED'	71	77	68
After incorrectly responding 'COMPLETE'	87	93	83

Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

Table A3.
Frequencies of English stimuli used in L2+L1 and L2+L1prac treatments

		Listening	Reading	Total
<i>Past Progressive (Ongoing)</i>	Session 1	8	8	16
	Session 3	12	12	24
	Session 4	8	8	16
<i>Past Simple (Habitual)</i>	Session 2	8	8	16
	Session 3	12	12	24
	Session 4	8	8	16
TOTAL ONGOING & HABITUAL		56	56	112
Juxtaposed with...				
<i>Present Progressive</i>	Session 1	8	8	16
<i>Present Simple</i>	Session 2	8	8	16
<i>Past Simple</i>	Session 4	8	8	16
GRAND TOTALS		80	80	160

Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

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APPENDIX B

Examples of French stimuli

Session 1. Ongoing: Participants choose between past vs. present

<i>Condition</i>	<i>Statives</i>	<i>Activities</i>	<i>Accomplishments</i>	<i>Achievements</i>
	Elle... 'she...'	Elle...	Elle...	Elle...
<i>Past (IMP)</i>	habitait tout seul 'was living alone'	fumait des cigares 'was smoking cigars'	écrivait une lettre 'was writing a letter'	finissait ses devoirs 'was finishing her homework'
<i>Present (PRES)</i>	adore la musique française 'is loving the French music'	nage dans la piscine 'is swimming in the pool'	chante une chanson 'is singing a song'	frappe son ami 'is hitting her friend'

Note. IMP=Imparfait, PRES= Présent

Session 2. Habitual: Participants had to choose between past vs. present

<i>Condition</i>	<i>Statives</i>	<i>Activities</i>	<i>Accomplishments</i>	<i>Achievements</i>
	Il... 'he...'	Il...	Il...	Il...
<i>Past (IMP)</i>	portait une cravate 'wore/used to wear a tie'	conduisait avec la famille 'drove/used to drive with his family'	regardait un film 'watched/used to watch a film'	perdait sa montre 'lost/used to lose his watch'
<i>Present (PRES)</i>	adore la musique française 'loves French music'	boit du café 'drink coffee'	joue un match de foot 'plays a game of football'	trouve sa voiture 'finds his car'

Note. IMP=Imparfait, PRES= Présent

Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

Session 3. Past: Participants had to choose between ongoing vs. habitual ('regularly repeated').

N.B. Words are underlined for illustrative purposes only, to indicate which verb the participants had to respond to. Only main->subordinate clause ordering is illustrated here.

<i>Condition</i>	<i>Statives</i>	<i>Activities</i>	<i>Accomplishments</i>	<i>Achievements</i>
	Elle... 'she...'	Elle...	Elle...	Elle...
<i>Ongoing</i> (<i>IMP +PC</i>)	<u>aimait</u> les fleurs quand son enfant a commencé à pleurer 'was liking the flowers when her child began to cry'	<u>mangeait</u> un sandwich quand la cloche a sonné 'was eating a sandwich when the bell rang'	<u>lisait</u> le journal quand son chef a sonné à la porte 'was reading the paper when her boss rang the doorbell'	<u>quittait</u> la maison quand son ami l'a appelé 'was leaving the house when her friend called her'
<i>Habitual</i> (<i>IMP +IMP</i>)	<u>savait</u> manger sainement quand elle allait à la gym 'knew/used to know how to eat healthily when she went to the gym'	<u>conduisait</u> avec la famille quand elle habitait avec son mari 'drove/used to drive with the family when she lived with her husband'	<u>jouait</u> un match de tennis quand il allait à la gym 'played/used to play a game of tennis when he went to the gym'	<u>remarquait</u> les touristes quand elle habitait à Paris 'noticed/used to notice the tourists when she lived in Paris'

Note. IMP=Imparfait, PC= *Passé Composé*

Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

Session 4. Past: Participants had to choose between ongoing vs. habitual (regularly repeated) vs. complete.

N.B. Words are underlined for illustrative purposes only, to indicate which verb the participants had to respond to. Only main->subordinate clause ordering is illustrated here.

<i>Condition</i>	<i>Statives</i>	<i>Activities</i>	<i>Accomplishments</i>	<i>Achievements</i>
	Il... 'he...'	Il...	Il...	Il...
<i>Ongoing (IMP + PC)</i>	<u>adorait</u> son nouvel album quand il est allé au travail 'was loving his new album when he went to work'	<u>fumait</u> des cigares quand sa femme est arrivée 'was smoking cigars when his wife arrived'	<u>mangeait</u> deux pommes quand le professeur est arrivé 'was eating two apples when the teacher arrived'	<u>finissait</u> son petit-déjeuner quand la cloche a sonné 'was finishing his breakfast when the bell rang'
<i>Habitual (IMP + IMP)</i>	<u>portait</u> une cravate quand il allait à l'école 'wore/used to wear a tie when he went to school'	<u>rigolait</u> dans le bar quand il buvait avec ses amis 'laughed/used to laugh in the bar when he drank with his friends'	<u>nageait</u> deux mètres quand il habitait près de la mer 'swam/used to swim two metres when he lived by the sea'	<u>trouvait</u> ses clés quand il passait le weekend chez lui 'found/used to find his keys when he spent the weekend at his place'
<i>Complete (PC + PC)</i>	<u>a aimé</u> la peinture quand sa femme est arrivée 'loved the painting when his wife arrived'	<u>a conduit</u> sa voiture quand il a reçu un SMS 'drove his car when he received a text message'	<u>a lu</u> un livre quand sa femme a commencé à jouer au piano 'read a book when his wife started to play the piano'	<u>est sorti</u> de la maison quand il a commencé à pleuvoir 'left the house when it started to rain'

Note. IMP=Imparfait, PC= Passé Composé

Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

Examples of English stimuli

Session 1. Ongoing: Participants had to choose between past vs. present.

<i>Condition</i>	<i>Statives</i>	<i>Activities</i>	<i>Accomplishments</i>	<i>Achievements</i>
	She...	She...	She...	She...
<i>Past (Past Progressive)</i>	was <u>hating</u> all the noise	was playing cards	was eating a sandwich	was ringing his friend
<i>Present (Present Progressive)</i>	is enjoying the weather	is listening to the music	is walking to the stage	is finishing his drink

Session 2. Habitual: Participants had to choose between past vs. present.

<i>Condition</i>	<i>Statives</i>	<i>Activities</i>	<i>Accomplishments</i>	<i>Achievements</i>
	He...	He...	He...	He...
<i>Past (Past Simple)</i>	liked the weather	did the washing up	ran to the park	found his watch
<i>Present (Present Simple)</i>	adores his boat	reads in the park	drinks a glass of wine	hits the wall

Session 3. Past: Participants had to choose between ongoing vs. habitual.

N.B. Words are underlined for illustrative purposes only, to indicate which verb the participants had to respond to. Only main->subordinate clause ordering is illustrated here.

<i>Condition</i>	<i>Statives</i>	<i>Activities</i>	<i>Accomplishments</i>	<i>Achievements</i>
	She...	She...	She...	She...
<i>Ongoing (Past Progressive)</i>	was <u>listening</u> to music when her phone rang	was <u>smoking</u> when the bus arrived	was <u>drinking</u> a cup of tea when the cup broke	was <u>knocking</u> at the door when her phone rang
<i>Habitual (Past Simple)</i>	<u>enjoyed</u> the weekends when she didn't work	<u>spoke</u> French when she had a French boyfriend	<u>read</u> the newspaper when she had the time	<u>arrived</u> on time when she lived closer to work

Running head: L1 EXPLICIT INSTRUCTION DURING PRACTICE

Session 4. Past: Participants had to choose between ongoing vs. habitual vs. complete.

N.B. Words are underlined for illustrative purposes only, to indicate which verb the participants had to respond to.

<i>Condition</i>	<i>Statives</i>	<i>Activities</i>	<i>Accomplishments</i>	<i>Achievements</i>
	He...	He...	He...	He...
<i>Ongoing (Past Progressive)</i>	<u>was hating</u> the soup when the waiter arrived	<u>was reading</u> when the baby started to cry	<u>was playing</u> a game of football when he fell	<u>was arriving</u> home when his phone rang
<i>Habitual (Past Simple)</i>	<u>liked</u> museums when he used to go on holiday with his dad	<u>listened</u> to music when he used to live alone	<u>ate</u> an apple when he used to make his own lunch	<u>left</u> the house when the postman used to knock
<i>Complete (Past Simple)</i>	<u>knew</u> the answer when the teacher started to ask questions	<u>cycled</u> to work when it started to rain	<u>wrote</u> a few sentences when the pen broke	<u>finished</u> the race when his wife called

APPENDIX C

Ongoingness (Present vs. Past), Session 1

	L2-only	L2+L1				
Pre-practice EI	<p>[A six-second video clip of man eating an apple. The apple was never fully eaten.]</p> <p>To describe this you could say:</p> <p style="text-align: center;"><i>Il mange une pomme</i> Or <i>Il mangeait une pomme</i></p> <p>The difference between these two is: Il mange = ongoing action RIGHT NOW Il mangeait = ongoing action IN THE PAST</p> <p>The ends of the verbs distinguish between an ongoing action in the present <i>versus</i> past e.g. [Four verbs presented in pairs, aurally and in writing]:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td><i>Présent</i> RIGHT NOW</td> <td><i>Imparfait</i> IN PAST</td> </tr> <tr> <td>regarde [rəgard]</td> <td>regardait [rəgardɛ]</td> </tr> </table>	<i>Présent</i> RIGHT NOW	<i>Imparfait</i> IN PAST	regarde [rəgard]	regardait [rəgardɛ]	<p>[Same video again as L2-only treatment]</p> <p>To describe this you could say:</p> <p style="text-align: center;"><i>He is eating an apple</i> Or <i>He was eating an apple</i></p> <p>The difference between these two is: 'he is eating' = ongoing action RIGHT NOW 'he was eating' = ongoing action IN PAST"</p> <p>To identify ongoing meaning in the present <i>versus</i> the past, you need to focus on the auxiliary.</p> <p>Look/listen out for 'is' or 'was' to indicate whether it is an ongoing action taking place RIGHT NOW (present) or it is one IN THE PAST (past)."</p>
<i>Présent</i> RIGHT NOW	<i>Imparfait</i> IN PAST					
regarde [rəgard]	regardait [rəgardɛ]					
Practice	<p>96 (48 listening; 48 reading) items. Learners must identify whether an ongoing event is taking place "MAINTENANT" (right now) or "DANS LE PASSÉ" (in the past), e.g.: Il... (1) fait du shopping ('is shopping') (2) parlait français ('was speaking French')</p>	<p>32 (16 listening; 16 reading) items. Learners must identify whether an ongoing event is taking place "RIGHT NOW" or "IN THE PAST", e.g. He... (1) is eating a sandwich (2) was running to the shop</p>				
EI given	After incorrectly responding	After incorrectly responding 'RIGHT				

<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60</p> <p>immediately after incorrect responses during practice</p>	<p>‘MAINTENANT’: <i>“NOTE: The IMPARFAIT expresses an ongoing event DANS LE PASSÉ, not an ongoing event taking place MAINTENANT”</i></p> <p>After incorrectly responding ‘DANS LE PASSÉ’: <i>“REMEMBER: The present tense in French expresses an ongoing event taking place MAINTENANT; not an ongoing action DANS LE PASSÉ”</i></p>	<p>NOW’: <i>“The present tense in English (‘is +ing’) and in French expresses the same thing: ongoing action taking place RIGHT NOW”</i></p> <p>After incorrectly responding ‘IN THE PAST’: <i>“The past tense in English (‘was +ing’) is the same as the IMP in French (+ait). They both express an ongoing action IN THE PAST”</i></p>
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