Chapter 7
Differentiating Task Repetition from Task Rehearsal

Gavin Bui and Rhett Yu

Abstract Asking second language (L2) learners to repeat the same or slightly altered tasks is a common practice in task-based language teaching (TBLT). Prior research suggests that, when properly designed, task repetition can induce natural re-occurrence of a task interesting to learners, hence less fatigue and boredom than dry rehearsal. Repeating a task has also been associated with heightened L2 performance in previous studies. What remains inadequate in the field, however, is an ill-defined construct of task repetition as it appears to be often construed synonymously with task rehearsal. This chapter is a response to Bui's (Processing perspectives on task performance. Benjamins, Amsterdam, the Netherlands, pp. 63–94, 2014) call to differentiate rehearsal from task repetition as two different constructs, with the former involving learners' awareness of future performance and the latter shunning such forewarning. Then a mini-meta-analysis of prior task repetition and rehearsal studies is presented to tease out the differentiating effects of the two constructs on L2 complexity, accuracy, lexis and fluency performance. Based on the patterns identified from the available information in those studies, theoretical and pedagogical implications are discussed.

Keywords Task-based language teaching · Task repetition · Task rehearsal · Task readiness · Task performance · CAF

Introduction

Task-based language teaching (TBLT) has come under the spotlight as a language pedagogy as it prioritizes meaning over forms, emphasizes concrete outcomes that require language use and stresses real-world relevance for transferrable skills. An important feature of TBLT lies in its nature as a researched pedagogy in which psycholinguistics plays a central role but other relevant theories (such as sociocultural theories) also contribute to its maturation and fruition. Among the different strands of

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research in TBLT, various types of task planning have attracted great attention in the field. Ellis (2005, 2009) broadly defined three types of planning: rehearsal, (pretask) strategy planning and online planning; he cited a wide range of prior research to show that these three planning conditions prepare second language (L2) learners for the task in different but often complementary ways. For example, strategic planning is usually found to benefit linguistic complexity and speech fluency while online planning could raise grammatical accuracy. The effects of different types of planning on L2 performance undoubtedly provide second (L2) or foreign language (FL) teachers with more insights into their classroom practice.

While Ellis' (2005, 2009) taxonomy has become a standard in planning studies, Bui (2014) pointed out two limitations. On the macrolevel, the scope of planning as preparation for task performance is somewhat limited. He argued that content familiarity and procedural familiarity, for instance, serve as implicit 'preparedness' for enacting a task. Bui termed the various forms of familiarity with the content, the task and the procedures as 'task-internal readiness' because they are inherent within the learners and require no additional planning time. In contrast, the three types of planning in Ellis (2005, 2009) are 'task-external readiness' as they are extra preparation opportunities. On the micro-level, Bui contended that Ellis and other researchers have not differentiated task rehearsal from task planning, which have been typically construed synonymously in the literature. In a series of papers (Bui, 2014; Bui & Huang, 2018; Bui & Teng, 2019), Bui proposed to differentiate task rehearsal from task repetition on a conceptual level. This paper will further examine empirical evidence in the TBLT literature and attempt to arrive at some preliminary conclusions as to how task rehearsal and task repetition exert differentiating effects on L2 speech complexity, accuracy and fluency (CAF or CALF to include lexis, See Bui & Skehan, 2018; Housen & Kuiken, 2009; Michel, 2017 for reviews) and why they should merit distinct statuses as task preparedness (Ellis, 2019).

Conventional Views of Task Repetition/Rehearsal

Rehearsal, although defined as 'a special type of pre-task planning…[in which the] performance of a task at one time can be seen as providing planning for performance of the same task at a second time' (Ellis, 2005, p. 476), has been simply treated as a form of task repetition where the first performance transfers certain skills to the next. As mentioned above, task rehearsal and task repetition have been used as exchangeable terms in the TBLT research. This equivalent view, however, oversimplifies what rehearsal implies and how it might impact the learners. The following subsections attempt to differentiate the two constructs.

Theoretical Underpinning of Repeating a Task

The effects of repeating a task on L2 performance or acquisition have been informed by numerous theoretical perspectives. One of the most influential theoretical bases cited in the discussion of task repetition is Levelt's (1989) psycholinguistic model of speech production. This model includes three stages: conceptualization, formulation and articulation. Conceptualization sets the goal of the speech and prepares the speaker with non-linguistic content. During formulation, the speaker chooses appropriate lexical items and a syntactic frame to map onto the preverbal message and creates a 'covert speech' with a phonological plan. At the final stage, articulation, the speaker coordinates motor mechanisms to produce an overt speech. Levelt stipulates that the conceptualization stage requires controlled processing for both native and L2 speakers as it is cognitive demanding to generate ideas on various occasions. While the remaining two stages prove to be automatic processes for native speakers, L2 speaking requires attentional resources which are often quite limited (Baddeley, 2003; Baddeley & Hitch, 1974; Skehan, 1998, 2014). Therefore, L2 speakers have to channel their attentional capacity to some but not all of the performance areas, such as complexity, accuracy *or* fluency. This is documented as the limited attention capacity (LAC) hypothesis (Skehan, 2014, p. 7; Skehan et al., 2012), or the trade-off hypothesis in Skehan's (1998) early term, which argues that joint focuses on complexity, accuracy and fluency in a task lead to cognitive overload for L2 learners; selected attention is the norm among L2 speaking. Skehan's theory makes an interesting contrast to Robinson's (2001) cognition hypothesis which states that higher task complexity would help guide learner attention to form, leading to jointly raised accuracy and complexity.

During the initial task performance, learners are more likely to focus on the conceptualization stage, e.g. generating ideas (Bui & Teng, 2018), especially when the learner focuses on meaning expression in a task. The repeated performance, in contrast, allows learners to shift their focus to formulation, articulation and even monitoring, as their cognitive capacity has been freed up with the prior planning of the content. It is important to note that while the literature has shown some agreement in the improvements to CAF as a result of task repetition, studies vary greatly in the findings of the effects on these three aspects, respectively. Indeed, few studies show simultaneous improvements in all three performance areas for learners under the task repetition condition (e.g. Ahmadian & Tavakoli, 2011; Bui et al., 2019; Wang, 2014), with most reporting enhanced complexity and fluency and mixed results on accuracy. As Ellis (2005) points out, 'if learners are viewed as having a limited processing capacity, they will find it difficult to attend to both complexity and accuracy and so will prioritise to one of these' (p. 502).

Another relevant theory to the benefit of repeating a task would be the skill acquisition theory (SAT), which has drawn from cognitive psychology (DeKeyser, 2007; DeKeyser & Criado, 2012). SAT stipulates that all skills can be acquired through similar stages by proceduralizing declarative knowledge to ultimately achieve automatization of the skill. The repetitive nature of task engagements allows learners to

proceduralize certain elements, for example, reoccurring phrases and grammatical patterns, and therefore releasing attentional capacity, performing increasingly effortlessly in subsequent repetitions and enhancing fluency and accuracy. Studies have compared the effects of exact task repetition and procedural repetition on CAF (e.g. De Jong & Perfetti, 2011; Fukuta, 2016; Kim & Tracy-Ventura, 2013; Lynch & Maclean, 2000; Patanasorn, 2010), and while the results are mixed, procedural repetition has been reported to enhance mostly accuracy and fluency. A caveat has to be made, though, that the number of repetitions in task literature is far from sufficient for genuine proceduralization of skills. Therefore, the performance of task repetition or rehearsal has to be thought of as an interim stage, somewhere along the continuum from a controlled to an automatic process, depending on the frequency of repetition, and thus, the progress, of practice.

Types of Repetition

Although the concept of repetition of a task is quite straightforward, there have been slightly different operationalizations of this construct. These operationalizations can be categorized according to the types, intervals and frequency of repetition.

Types of Repetition Condition

Patanasorn (2010) proposed three types of repetition, with different combinations of whether the content, the procedure or both are repeated in a task. Content repetition repeats the content of the task but not the procedure. Procedural repetition repeats the procedure of the task with different contents. Task repetition repeats both the content and the procedure of the task (i.e. an exact repetition). Earlier studies on the effects of task repetition (e.g. Bygate, 2001; Lynch & Maclean, 2000) on task performance were in the form of what Patanasorn (2010) called 'task repetition', by which she meant exact repeated tasks with both identical content and procedures. However, she later demonstrated that content repetition (same content, different task) and procedural repetition (same task, different content) improve learners' global proficiency and accuracy, respectively, but that task repetition did not show statistically significant enhancements in any aspects of language production. These results led her to believe that the repetition of a single aspect of the task may be more useful than offering a complete replica of the task. However, subsequent studies following Patanasorn's distinction have shown mixed results on the effects of different operationalization of repetition. For example, Kim and Tracy-Ventura (2013) found that both task and procedural repetition yield improvements in accuracy and syntactic complexity. Also, Fukuta (2016) studied the attention orientation of learners from task repetition and procedural repetition and showed that the former led to better performance in accuracy and lexical variety than the latter. These studies reflect that

the condition of repetition does not necessarily encourage learners to prioritize their attentional resources on specific aspects of the task.

Types of Repetition Intervals

Task conditions in the literature also differ in terms of time intervals between repetitions. Bui et al. (2018) categorize three broad operationalizations of repetition: immediate task repetition, intervaled task repetition and multiple task repetitions across long intervals.

An immediate task repetition typically requires a learner to perform the same task consecutively. For example, Lynch and Maclean (2000) asked L2 learners to give poster presentations six times to different interlocutors. The results indicated that intermediate learners performed better in terms of fluency and accuracy. In another study, Wang (2014) requested the learners to tell a story again to an imaginary listener immediately after narrating along with the source material (i.e. story shown in a video). The finding showed improvements in complexity, accuracy and fluency. Lambert et al. (2017) engaged the participants in aural-oral tasks for six times as repetitions and found that speech fluency was enhanced.

Previous studies also investigated intervalled task repetitions spaced one day to ten weeks apart. For example, Bygate (1996) administered a three-day intervalled task repetition and found positive effects on speech accuracy and fluency. Ahmadian and Tavakoli (2011) and Fukuta (2016) both studied the effects on CAF after repetition with a one-week interval but reported mixed results. While Ahmadian and Tavakoli (2011) found enhancements in all three areas of speech production, Fukuta (2016) only observed improvements in accuracy and lexical variety, adding that exact task repetition is more effective than procedural repetition. More recently, Bui et al. (2019) explored task repetition under five interval conditions between the initial and repeated performance. The EFL learners in their study performed a picture description task and repeated the same, unanticipated task with either no interval (immediate repetition), a one-day, a three-day, a one-week or a two-week interval. The results were that task repetition per se exerted a positive effect on L2 performance regardless of the length of intervals. The interval conditions appeared to 'mediate the effects of task repetition in terms of fluency and structural complexity with speed fluency benefitting most from immediate or small intervals between initial and repeated performances' (p.1). They also found that a one-week interval was the task condition most conducive to the improvement in structural complexity and repair fluency.

The final type of task repetition involves repeating the same task multiple times across an extended period, usually over a week or a whole semester (as regular class training). Bygate (2001) tested the effect of task repetition (content repetition) and task-type repetition (procedural repetition) under an experimental condition of multiple repetitions across a ten-week interval and found that speech complexity and fluency were improved in the repeated task performance after ten weeks. Gass et al. (1999) compared the effect of task repetition and procedural repetition on general

proficiency, accuracy and fluency. They discovered that, at an interval of two to three days, the third and final repetitions displayed improvements in general proficiency, accuracy of the Spanish variants of 'to be', morphosyntax, lexical density and lexical sophistication.

Frequency of Repetition

Studies of task repetition have also varied in the frequency of repetitions, i.e. the number of times one repeats a task. Most of the studies in the task literature have a frequency ranging from one (e.g. Wang, 2014) to six times (e.g. Lambert et al., 2017). Theoretically, there is no upper limit to the number of repetitions, but in reality, there is a concern for boredom and fatigue if one has to perform the same learning task multiple times.

Repeating a task one time often leads to improvement in performance, possibly due to an instant familiarization of the task content or the task type, which constitutes task-internal readiness (Bui, 2014). For example, Bui et al. (2019), Bygate (1996, 2001) and Wang (2014) all required their participants to only repeat the same task (or task type) once, and the findings all showed improvements in fluency and complexity (Wang even found an effect on increased accuracy). That might suggest that even one repetition is sufficient to invoke task or content familiarity, hence task-internal readiness, leading to an overall enhancement in performance.

Studies with multiple repetitions are more likely to discover gradual effects on CAF or even the trend of the change in CAF so as to determine the optimal number of repetitions for effective language learning. For example, Lambert et al. (2017) found that the speech rate of the participants improved markedly over the first three performances, but the improvement only lasted until the fifth performance. Moreover, they found that the frequency of overt self-repairs decreased in the fifth and the sixth performance. They argued that the participants' accuracy and efficiency in linguistic encoding had improved by then and therefore fewer self-corrections or reformulations were necessary. Their study also questioned the participants' perception of the numbers of repetitions, and of those who felt that five repetitions were not necessary; they reported that a repetition of three to four times is sufficient.

Problems with the Conventional Views of Task Repetition

As can be seen in the previous section, the operationalization of task repetition varies in terms of task type, repetition type, length of interval and repeating frequencies, and has therefore made it difficult to compare the results of different studies. In particular, there is a paucity of report on the awareness of the learners of future performances, as task repetition (involving unwitting learners) has been used synonymously with rehearsal (with informed participants). Ellis (2005), for example, reviewed articles

which he considered to be about rehearsal, with most of the cited studies (e.g. Bygate, 1996, 2001; Gass et al., 1999) having studied task repetition rather than rehearsal, as defined by Bui (2014) and Ellis (2019) himself. Bui (2014) highlighted the distinction between task repetition and task rehearsal, with the main difference lying in 'whether one knows if s/he is going to do the task again' (p. 67). In Bui's theoretical framework of task readiness, task repetition represents a form of implicit planning (or, in Bui's term, task-internal readiness), where learners can potentially benefit from topic and procedural familiarity; whereas task rehearsal offers explicit planning opportunities (or task-external readiness) for learners to practice for the next round of performance.

Unfortunately, as Ellis (2019) commented, 'Bui's (2014) suggestion that we should distinguish between 'rehearsal' and 'repetition' has not been acted on to date' (p. 17). Most studies in the literature (e.g. Bygate, 1996, 2001; Gass et al., 1999) do not make a distinction between task repetition and rehearsal, as the description of the procedures only includes information regarding task type, repetition type, length of interval and repeating frequencies, but never participants' knowledge of potential future repetitions. In other words, task repetition has been used synonymously with rehearsal in the literature.

This distinction, however, is a 'potentially important distinction' (Ellis, 2019, p. 18), as the pre-task awareness may direct learners' attention resources to the formulation stage (in Leveltian terms) in the planning of their subsequent speech performances, leading to more interesting observations on the effects on CAF (See Sect. 3). The following sections will review relevant research to identify possible differences in the effects resulting from a task repetition and a task rehearsal condition, respectively.

Differencing Task Repetition from Rehearsal on Performance

Given the qualitative difference between rehearsal and repetition, one would wonder 'which has a stronger influence on the improvement of task performance' (Bui, 2014, p. 67). This section discusses the possible effects of the two constructs on speech production.

The key difference between rehearsal and repetition lies in whether the learner is conscious of the task preparation. Therefore, to discuss their effects on CAF, it should be useful to look at how the presence of attention contributes to learning. Tomlin and Villa (1994) offered a fine-grained analysis of attention, where they divide attention into three parts: alertness, orientation and detection. Alertness means the readiness to receive incoming stimuli. Orientation is the process of directing attentional resources to a particular type of input and ignoring other input. Finally, detection is the selection and registration of such sensory stimuli in memory. They argued that detection does not require awareness. In other words, learners can benefit from certain language input without realizing their effects. This can be seen from studies such as Lynch and Maclean (2000) in which half of the participants engaging

in repeated task performance reported they did not consciously make improvements in their subsequent language output, whereas the transcripts of their performance showed otherwise. Concerning attention to the level of detection, both constructs should provide students with benefits in future oral production as they have registered certain elements in the input to feed into the next repetitions.

However, what rehearsal adds to the learner's preparedness, which repetition does not, is the awareness of future performance(s). This constitutes what Bui (2014) terms a form of 'task-external readiness', where learners are given extra preparation and thus external manipulations for a task. The construct is analogous to N.C. Ellis's (2015) view of explicit learning, which he considered just as important as implicit learning, especially in the context of L2 learning. If learners are aware of next enactments of the same task, they would (possibly) start to rehearse (or practice). They would reflect on what they could have done better from their performance last time and work on improving different aspects of their oral production. This performance thus acts as their chance to experiment with the language and to consciously learn from their mistakes, in the hope of improving them in future repetitions. That makes it clear why Bui (2014) categorized rehearsal under what he calls task-external readiness (alongside strategic planning and online planning), where it is essentially a form of hands-on planning.

Levelt's (1989) 'blueprint of speaking' is another theoretical model of speech that might shed light on the effects on oral task performance under the two contrasting conditions. Anticipating beneficial outcomes, learners will make a deliberate effort in carrying certain 'rehearsed' elements to the next task performance, triggering the monitoring mechanism in Levelt's model, where learners strive to ensure an accurate speech production. However, as studies about careful online planning (e.g. Ahmadian & Tavakoli, 2011; Ellis, 2003; Ellis & Yuan, 2005) have demonstrated, planning within a task severely degrades learners' fluency in oral production (but raises accuracy). This is likely to be caused by conscious use of explicit rules to monitor an otherwise natural speech, leading to pauses or fillers (if monitoring behaviours occur in formulation) and reformulation or false starts (if the monitoring occurs after articulation). However, under the rehearsal condition, this form of online planning might elicit a specific strategy from learners, namely that they, being aware of their limited attentional resources, might pre-emptively focus on a single aspect of oral production and allocate attentional resources to such an aspect during the performance, thus alleviating cognitive load. This has implication for varying effects under the two conditions on CAF: task repetition would result in improvements in multiple aspects of oral production (usually two to three aspects), while task rehearsal would enable learners to strategically enhance their speech performance with a limited scope (possibly only one aspect).

However, it should be noted that the difference between rehearsal and repetition might become negligible should the repetition interval be too long for memory to facilitate monitoring (e.g. a two-week interval in Bui et al., 2019). This is to say, the repeated task needs to follow shortly after the initial task for the benefits of rehearsal to take effect. Assuming learners do not practice on purpose during the time interval between the previous enactment and the next, attention paid to specific areas in the

task performance would fade. In other words, the practice effect or rehearsal in the previous performance should not be sufficient for learners to proceduralize any sort of oral production skills that can be carried over to the next performance. In this case, the effects of rehearsal and repetition on CAF should be similar. It is even possible that the task repetition condition might be more beneficial in causing acquisition in the long term than rehearsal, given repeated training scattered across a long time (e.g. weekly for one semester). This is because rehearsal promotes task-external readiness, which would benefit mainly performance; while task repetition contributes to task-internal readiness, where learners might, through unconscious proceduralisation, acquire language skills in the long term. Longitudinal studies about the role of task repetition and rehearsal in language acquisition are needed in the future.

Effects of Task Repetition on CAF

Though most prior studies on task repetition did not report whether learners were informed of the future performance, some exceptions did exist, as summarized in Table 7.1. Bygate (1996), for example, conducted a small-scale experiment, where participants were asked to watch a cartoon video for about 90 s and then to retell it immediately. The same task was repeated after three days without warning. He found that the learners improved in both accuracy and fluency, with a marked widening of lexical repertoire and a 75% increase in the use of subordinate clauses in their second

Table 7.1 Studies with task repetition

Study	Rehearsal /repetition	Task types	Repetition types	Intervals (repeat)	Dependent variables	Results
Bygate (1996)	Repetition	Narration	Exact	3 days (×2)	CALF	TR > NR in AF
Bygate (2001)	Repetition	Narration, interview	Exact + procedural	10 weeks (× 2)	CALF	TR > NR in CF
Ahmadian and Tavakoli (2011)	Repetition	Narration (immediate)	Exact	1 week	CAF	CAF improved with online planning
Wang (2014)	Repetition	Narration (simultaneous)	Exact	Immediate (×2)	CALF	TR > NR in CAF ns in L
Bui et al. (2019)	Repetition	Narration	Exact	Immediate, 1 day, 3 days, 1 week, and 2 weeks	CALF	TR > NR CF with weak A, ns in L

TR Task repetition, *NR* Non-repetition, *C* Complexity, *A* Accuracy, *F* Fluency, *L* Lexical diversity

performance. Later, Bygate (2001) used a more complex experimental design to test the long-term effects of task repetitions on oral production. Forty-eight participants were assigned into two treatment groups (narratives or interviews) and a control group. Each group engaged in both exact task repetition and procedural repetition after a ten-week interval. The results indicated that participants who repeated the same task performed better in terms of fluency and complexity, but there were no statistically significant improvements for the other two groups.

Ahmadian and Tavakoli (2011) used four different experimental groups to research the effects on oral production with combinatorial conditions in terms of time pressure, online planning and task repetition. Sixty participants were divided into four groups of different task conditions, two of which involved the task repetition component (together with pressured online planning or careful online planning). Participants in these two groups were asked to watch a 15-min silent video and narrate it immediately. They were asked to repeat the exact task in a week without being warned of such repetition. The authors found that the group with task repletion and carefully online planning as conditions simultaneously showed improvements in accuracy, complexity and fluency.

Wang (2014) studied intermediate to advanced students using immediate task repetition as one of the five experimental conditions. The learners were asked to narrate a video they had seen immediately, and they were not told of the second performance until they had finished the first. The results for the repetition group were statistically significant in complexity, accuracy and fluency, with large effect sizes.

Bui et al. (2019) were probably the first study to involve different spacing conditions, from immediate repetition to a two-week interval, between the initial and the reiterated task. The second, repeated task came as a surprise to participants in all these interval conditions as they were intentionally kept unaware of it. With all task conditions taken together, task repetition significantly raised breakdown fluency but not repair fluency, structural complexity but not lexical complexity (as in D, or lexical diversity). An interesting finding in this study has been that accuracy was slightly improved in the repeated task when it was measured in the number of errors per 100 words; task repetition did not impact on the 'ratio of error-free clauses' measure.

Effects of Rehearsal on CAF

As mentioned, most of the studies in the literature have not explicitly stated if their participants were notified the possibility of future performances. Even with the ones that do, their experimental conditions are all in the form of task repetition. However, some studies have subtle indications that can lead readers to deduce that the participants in their studies were in some way alert of such possibility (a rehearsal as the condition). As Ellis (2019) comments, 'in some studies …where the same tasks were repeated multiple times, it will become evident to learners that they may have to perform the task again' (p. 18). With the exception of clear indication of a test

Table 7.2 Studies with rehearsal

Study	Rehearsal/repetition	Task types	Repetition types	Intervals (repeat)	Dependent variables	Results
Lynch and Maclean (2000)	Rehearsal (recycle/retrial)	Communicative (poster carousel)	Procedural (poster carousel)	Immediate (×6)	Accuracy, fluency	RH > NR in AF
Patanasorn (2010)	Test practice → rehearsal Rehearsal (p. 67)	Narration	Exact vs. procedural vs. content	3 weeks (×3)	Global accuracy and fluency, accuracy of simple past tense	PR or CR > TR in A or F
De Jong and Perfetti (2011)	Rehearsal	Narration	Exact vs. Procedural (planning available before next TR)	Immediate (after short interviews) (×3)	Fluency	TR > PR in F
Thai and Boers (2016)	Rehearsal	Narrative talk	Exact	Immediate (×3)	Fluency, structural complexity, accuracy	TR > NR in F
Lambert et al. (2017)	Rehearsal with procedural (task set)	Instruction, narration, opinion, communicative	Exact	Immediate (×6)	Fluency (4 measures)	TR > NR in F

RH Rehearsal, *TR* Task repetition, *PR* Procedural repetition, *CR* Content repetition, *NR* Non-rehearsal, *C* Complexity, *A* Accuracy, *F* Fluency

Table 7.3 Unspecified studies with repeated performance

Study	Rehearsal /repetition	Task types	Repetition types	Intervals (repeat)	Dependent variables	Results
Gass et al. (1999)	unknown	Narration (simultaneous)	Exact + Procedural	2–3 days (×3)	AL (morpho-syntax accuracy + lexical sophistication)	R > NR Proficiency Partly accuracy, TTR, lexical density and sophistication
Kim and Tracy-Ventura (2013)	Unknown	Communicative	Exact vs. procedural	Three days (×3)	CAF	PR > TR in syntactic complexity ns in AF, lexical complexity
Fukuta (2016)	Unknown	Narration	Exact vs. procedural	1 week (×2)	CALF	TR > PR in A & L ns in C & F

R Repeating, *NR* Non-repeating, *TTR* Type-token ratio, *C* Complexity, *A* Accuracy, *L* Lexical diviersity, *F* Fluency

practice before the task (e.g. Patanasorn, 2010), the experiments in the studies share the following features to be deemed a rehearsal condition: (a) the task is repeated for more than 3 times; (b) the repetitions take place within the same day (usually immediate) with some hints.

Lynch and Maclean (2000) studied how task rehearsal influences the global accuracy and fluency among L2 learners in an English for specific purposes course. The task used in the study is called the 'poster carousel' (Lynch & Maclean, 1994). It first required participants to pair up, and each pair was given a different research article. Then the pairs would make a poster based on the article. The task involved the six pairs standing at different parts of the room, and one of the participants in the pair began by going around the room and asking questions about other posters. The partner that stayed (the host) was responsible for answering the questions from students of other pairs. This process was repeated six times until all six posters were consulted once and the partner returned to his/her own poster, at which point is the host's turn to repeat the same task. This aural-oral task, as Lynch and Maclean caveated, is not the same as what Bygate (1996) termed 'task repetition', as it is not a strict duplication of a task. The authors instead explained that in their case, 'the basic communication goal remains the same, but with variations of content and emphasis depending on the visitor's questions' (Lynch & Maclean, 2000, p. 277). This description matches what Patanasorn (2010) called 'procedural repetition', where the content of each repetition is different, yet the procedure (question and answer) remains the same. Given the design of the task, participants who walked around to ask questions about posters would have anticipated asking similar questions to the following posters station, for example, 'What is this article about?' or 'This is interesting. Can you tell me more about the implications for this study?'. This also goes for 'the host', who had probably prepared a set of answers for certain common questions from visitors. Therefore, it can be inferred that the learners were engaged in some sort of rehearsal while they were performing the task. The two participants that were studied, despite reporting contrasting language self-monitoring, show a general improvement in accuracy, and yet fluency (measured by speech rate) became gradually stable across the carousel task. Transcripts of their task performances reflect that they showed gradual enhancement in accuracy in terms of lexical use, syntactic structure and pronunciation, with the rate of speech improved from the first enactment and slowly remained stable from the second enactment onwards. The authors ascribed this to the unfamiliarity with the task content on the first trial. Moreover, it is observed that, across the six repetitions, the high proficiency learner was able to first enrich the explanation and then make it more concise in later repetitions. In other words, she/he was able to condense the language and achieve the same communicative goal, implying a possible improvement in syntactic complexity in the first few repetitions. In short, they concluded that such task rehearsal (in procedure but not necessarily in content) benefits learners in terms of accuracy and syntactic complexity, but not fluency.

De Jong and Perfetti (2011) employed a 4/3/2 task design to increase time pressure for learners when they repeat a task. The repetition groups (repetition and repetition II) repeated the same task for 4 min, 3 min and 2 min in the same training session on the same day, and they performed the 4/3/2 tasks three times in total for two weeks. This

means that, over a course of two weeks, the learners would have performed similar tasks for nine times. Therefore, at some point during the second 4/3/2 task, participants should have expected a possible similar procedure in the future. This allowed them to expect future performance and started rehearsing in early task performances. The results in the post-test, both immediate (for repetition group) and delayed (for repetition II group), showed that fluency was improved, as opposed to the control group, which did not. The findings also suggested that the benefits of fluency could be maintained over four weeks and transferred to new topics. Though De Jong and Perfetti (2011) only focused on L2 fluency, Thai and Boers' (2016) similar study did explore how the 4/3/2 task rehearsal could benefit L2 CAF. Their results were in line with De Jong and Perfetti in that only greater fluency was achieved but not accuracy or complexity. Thai and Boers discovered that these learners resorted to 'a high amount of verbatim duplication from one delivery of their narratives to the next, which explains why relatively few changes were attested in performance aspects other than fluency' (p. 369).

Another study that can be assumed to have used rehearsal instead of task repetition as the experimental condition is Lambert et al. (2017). The study aimed to find out if task rehearsal could affect L2 fluency in the short term. A total of 32 English learners (Japanese native speakers) were assigned into four groups of eight. The participants were then paired up to perform four tasks in a task set (instruction, narration, opinion and a dialogue task) twice, once as the speaker and once as the listener. After they have finished the task set, they changed partners and repeated the same process, until they have repeated the task set for five times with different partners. Learners were assigned into groups before the experiment, and the pairing was done before the task rehearsal began. Moreover, as the task set needs to be repeated six times (twelve if speaker and listener role are considered separately), the learners should have figured out early in the experiment that they have to repeat the same task in the future, and hence, a task performance would constitute a rehearsal for the next. The results showed that fluency was able to improve gradually starting from the second repetition up until the fifth, at which point the authors deemed it as the optimization of the effects of task rehearsal on fluency. It should be noted that this study, like De Jong and Perfetti (2011), also had only measures related to fluency and therefore the task rehearsal effects on complexity and accuracy remained opaque.

Studies Without Demarcation Between Repetition and Rehearsal

Research information that has been reviewed in Sects. 4 and 5 is largely based on inference from the descriptions given in the methodology section of the mentioned studies. That being said, many other papers do not include sufficient detail for a replication of the experiments concerning the difference between rehearsal and task repetition. This section reviews a sample of these studies.

Gass et al. (1999) used similar task materials used in Skehan and Foster (1997, 1999) to test if the benefits of task repetition can be emulated in a new context. A group of English learners (with L1 Spanish) was separated into two experimental groups (exact task repetition and procedural repetition) and a control group (without task repetition), where the first experimental group watched the same Mr. Bean video for a total of three times at a two to three days interval, with the second experimental group watching different episodes following the same procedure. The results showed improvements for exact task repetition in areas such as overall proficiency, morphosyntax and lexical sophistication. However, those benefits were not transferred to a new task in the post-test.

Kim and Tracy-Ventura (2013) studied 32 female Korean junior high students with high EFL proficiency. The participants were divided into two experimental groups (exact task repetition and procedural repetition) and were required to work on three information exchange tasks, with the exact task repetition group repeating the same task and the other repeating with different content, at a one-day interval for three days. The results generally provided no statistically significant results to support that one type of repetition is better than the other, nor that task repetition treatment improves overall accuracy, complexity or fluency in any way.

Fukuta (2016) studied 28 EFL learners in a junior high school in Japan. The students formed an experimental group and a comparison group. They engaged in a narrative task of six-frame cartoons. The experimental group repeated the exact task with the same cartoon one week later. The comparison group repeated the same task type with different pictures. The results showed that there were remarkable improvements in accuracy and lexical variety for the experimental group, whereas fluency and complexity measures showed no statistically significant differences.

Conclusion and Implications

This chapter reviews previous definitions of task repetition and their limitations in the ambiguity of learner awareness of the repetition. It is argued that task rehearsal should be differentiated from task repetition, as the former involves task-external readiness with potential explicit learning while the latter constitutes task-internal readiness with potential implicit learning. Unfortunately, except very few studies (e.g. Bui et al., 2019), the majority of task repetition research to date has not specified whether their participants were forewarned about future performance; hence the potential differentiating effects being overlooked. Based on a small number of studies in which the judging criteria were clear or could be inferred with some confidence, the following preliminary conclusion could be made:

1. Task repetition with participants uninformed about future performance seems to boost a more balanced range of performance areas in complexity, accuracy and fluency, such as Wang (2014) with strong CAF effects and Bui et al. (2019)

     with strong complexity and fluency effects and weak but statistically significant accuracy effect.

2. Task rehearsal with explicit instruction on the next iteration(s) appears to direct learner attentional focus to certain performance areas, such as fluency in De Jong and Perfetti (2011) and Thai and Boers (2016), complexity in Kim and Tracy-Ventura (2013), and accuracy in Lynch and Maclean (2000).

3. Immediate repetition has shown consistent effects on CAF, but different spacing conditions or lengths of the intervals may lead to different performance outcomes. Bui et al. (2019) found that fluency benefited most from the shorter intervals while the one-week interval was the most conducive condition for other aspects of speech. Replication of this study with different task types is needed to further examine the best interval between repeated tasks.

4. From a skill acquisition theory perspective, multiple repetitions are encouraged in the classroom (Lambert et al., 2017). The optimal frequency for task repetition at different proficiency levels warrants further investigations.

5. There appears to be more production or output-based task repetition and task rehearsal research than comprehension or input-based research. TBLT should benefit from more research insights from the latter.

6. It appears that the task repetition and task rehearsal literature typically focuses on clause-based measures for (syntactic) complexity; L2 lexical complexity has only been occasionally employed (Skehan, 2009). It is suggested that future research should consider lexical complexity more systematically to include lexical diversity, lexical sophistication and lexical density (see Bulté & Housen, 2012 for the definitions and Bui, 2019 online for operationalization of these constructs in empirical research).

7. It becomes obvious that future research in this area should clearly report whether the learners are engaged with task repetition, task rehearsal or both at different stages.

    Pedagogically, both task repetition and task rehearsal have been shown to benefit L2 language development in terms of their ability to mitigate processing demands, to direct attention to form and to enhance proceduralization and automaticity in an L2. To achieve these ends, rehearsal could first of all be utilized for learners with relatively lower proficiency as preparedness (Ellis, 2019; Skehan, 2014) for an upcoming task to boost their confidence as well as actual L2 performance. The explicit instruction on the next round(s) of the same task may help reduce anxiety about an impromptu task. However, dry rehearsals like this may cause boredom and fatigue, especially for more proficient learners who are capable of improvisation for certain tasks. Then, task repetition can chip in to help more able learners as unwitting participants consolidate or extend their performance. At a more advanced level, procedural repetition with altered content can be adopted to increase the linguistic and cognitive challenges. Secondly, the frequency and the interval of repetition are essential considerations for the implementation of these task conditions. The research discussed earlier seems to suggest a 3–4 times repetition schedule after which the benefits attenuate (Lambert et al., 2017). Then, how to optimally space out repeated

tasks is the next decision to make. Prior studies recommend shorter intervals (such as immediate repetition) for enhanced speech fluency, but they also recommend a one-week interval for language restructuring and improvement (Bui et al., 2019). Longer intervals than a week may still be useful, but they do not seem to be the most conducive for overall L2 performance. To sum up and conclude, teachers should make balanced arrangements of task repetition and task rehearsal in the lesson design with due consideration to learner proficiency and emotional responses along the scale from low to high linguistic and cognitive demands that are imposed on L2 learners. That way we can scaffold language performance and acquisition in a gradual and cyclical manner that characterizes L2 learning.

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