Agency and technology-mediated task repetition with young learners

Research and implications for primary classroom practice

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This paper offers a review of the TBLT literature for young learners with an aim to identify some gaps where future research and classroom practice could be targeted. The specific focus of this review is on procedural task repetition for children, arguing that in addition to the linguistic benefits, task repetition is associated with important gains in the affective domain. It is suggested that technology-mediated task repetition, via tablet devices, can further enhance both opportunities for learning and confidence building and enjoyment. Due to the technological affordances, the learners are firmly in charge of creating dynamic, fluid tasks through cycles of reflection and practice, polishing their performance along the way, stretching towards their 'upper potential'. To date research within TBLT with children has not explored yet what types of tasks children enjoy working with and why and how task repetition is realised when using tablet devices to record their own performances. This paper suggests steps that can be taken in this direction both in research and classroom practice.

Keywords: TBLT, task repetition, tablet devices, learner agency, technology-mediated learning

1.   Introduction

TBLT (task based language teaching) in second language education has been a buoyant area of research as well as a popular approach in classroom practice worldwide for at least two decades now. Even though research in TBLT undertaken with young learners is growing steadily, much less attention has been paid overall to children as opposed to adults, especially in EFL contexts where levels of L2 proficiency remain low and expectations and outcomes are much less clear-cut

than in adult L2 learning contexts. National guidelines and curricula do exist for most primary EFL contexts but there is still a lack of smooth transition between primary and secondary sectors, made worse by a shortage of qualified teachers, and general uncertainty as to what levels of English children need to achieve by the end of their primary schooling (e.g., Enever, 2018).

This paper will attempt to review the literature on TBLT for children, albeit selectively, with a particular emphasis on the role of task repetition. Benefits of this task condition will then be linked to agency and the affordances of tablet devices as learning tools. There is already a great deal of consensus and systematic evidence documented about the positive impact of task repetition on all learners' language performance, including both adults and children, but in this paper I will argue that task repetition is particularly appropriate and meaningful for young learners for a range of reasons including affective reasons such as impact on motivation and self-confidence. I will then highlight how ICT tools, in particular mobile/ tablet devices (I-pads) – used as recording facilities – can engage children in repetitive meaningful and authentic language practice mediated by the affordances of the technology. When children are encouraged to take control of the mobile device, they exercise their agency in creating fluid/ dynamic tasks while engaging in self-assessment and evaluation of their own and peers' performance (e.g., Pellerin, 2014).

To date the majority of studies with children (and indeed with adults) have not explicitly focused on learner agency and learner input even though learners' views and insights about task content and task-related performance would be immensely valuable with the potential to feed into more successful and targeted implementation of learning tasks in any context.

2.   Tasks and young learners

'Young learners' is an umbrella term used rather conveniently in SLA and second language education in general denoting non-adult, child learners (e.g., see the definition of this journal which refers to both children and adolescents when using the term 'young learners'). Whatever definition is used, it is almost always immediately acknowledged that the label covers a range of age groups of language learners with rather different characteristics and motivations to learn. As Ellis (2014, p. 75) reminds us young learners or children cover a wide range of learners who 'differ greatly (…) in terms of their physical, psychological, social, emotional, conceptual and cognitive development as well as their development of literacy'. With this caveat, for pragmatic reasons, in this paper I will continue using a loose

definition of young learners and include references to studies with children from pre-school to secondary school ages.

Definitions of language tasks are also multiple and various (e.g., Ellis, 1996, 2003; Long, 2015, 2016; Nunan, 1989, 2004; Samuda & Bygate, 2008; Skehan, 2003; Willis, 1996; Willis and Willis, 2007), and, while a comprehensive analysis of all the definitions is beyond the scope of this paper, a quick overview of the most frequently cited definitions confirms that at its core a task is always seen as a meaning-focussed, purposeful language activity with a well-defined end point and outcome. This definition contrasts tasks with mechanical exercises or drills. All definitions in the literature refer either explicitly or implicitly to adult learners when discussing features of tasks even though it may be the case that tasks designed for older learners and adults with specific design features cannot be automatically used with younger learners. To my knowledge only a handful of sources have explicitly discussed to date how tasks may be/ should be different when targeting L2 child learners.

Under close scrutiny some adult definitions and conceptions of L2 language tasks do indeed seem problematic for children. Long (2016), whose task definition is widely used in ESL contexts, for example, promotes a real life needs-based approach to defining and selecting tasks for L2 learners but younger learners' needs are often vague, or even non-existent in early compulsory English education and even if existent, these needs are likely to change rather dynamically over time (e.g., Cameron, 2001). By extending the criteria of being meaningful and purposeful, some authors have argued that L2 tasks for young learners need to be playful, allowing for active participation, creativity, imagination and fun that feed intrinsic motivation as well (e.g., Pinter 2015, Legutke et al. 2009, Verheyden and Verhelst 2007). Tasks also share key characteristics with some language games in that both are driven by a clear outcome and both are meaningful and purposeful, although language games can be focussed on accuracy. Palmer and Rodgers (1983) define games as rule-governed and goal-oriented activities, which are mostly competitive, i.e., where one competes against others or against oneself trying to beat a previous score. Rixon (1981) suggests that well-designed language games develop their own momentum (i.e., children want to play it again and again) and even though language use is important, the success of the task is ultimately judged by the outcome rather than just the correctness of what was said. A fun game/ task is thus often repetitive.

Which tasks may be suitable for children is an underexplored area and we certainly know very little about children's views on this. Teachers as well as materials designers are often unclear about what tasks might be suitable/attractive to young learners. In fact there is often scepticism among teachers in primary school contexts regarding the suitability of TBLT altogether and they often dismiss it as

not relevant for beginners at a young age on the grounds that the children are not ready yet to express themselves spontaneously, to interact with a partner meaningfully and to fall back on sufficient levels of language competence. Published ELT textbooks do not seem to include much task-based content for young learners despite clear intentions articulated by curriculum developers and policy makers in many contexts worldwide. Recently, Butler et al. (2018) evaluated language learning tasks in popular primary L2 English textbooks in Asia with a view to discover what types of tasks were mostly used and taught. Two sets of young learners course books used in South Korea and four sets in China were analysed following the criteria taken from adult definitions in the literature (Willis, 1996; Ellis, 2003; Littlewood, 2004, 2007; Long, 2014). Both of these contexts explicitly promote CLT and task-based learning for children at the policy level. The authors found that 'non-tasks' (Bulter et al., 2018, p. 292) were dominant in all the textbooks 'despite policies requiring or strongly recommending TBLT' (ibid). Butler et al. also remark that 'there is little research in task elements that may aid young learners' task performance by attending to their affective needs' (p. 294). Indeed more research into what young learners enjoy and attend to during various types of tasks is needed urgently.

3.   Agency and control

The broad aim of TBLT is to offer rich and meaningful language learning and language practice opportunities to L2 learners although it is difficult to agree what types of tasks are suitable, appropriate and motivating for a group of learners of a particular age. In theory it is possible to engineer tasks that are likely to elicit prescribed language, i.e., force learners in a particular direction, such as for example by insisting that a language feature *must* be used by making it essential for task completion (e.g., Loschky & Bley-Vroman, 1993). In general there is widespread agreement among TBLT researchers and practitioners that a task designed by teachers, researchers or materials writers is always just a 'workplan' and as such it can only reflect the intention of the designer (Ellis, 2003, pp. 9–10) but it can never guarantee the intended outcome. How a task enfolds in different classrooms with different learners will vary as learners and teachers will inevitably engage with the same task in slightly or sometimes markedly different ways. This contrast between a task as a workplan as opposed to task in its actual realization in a classroom is strongly supported by research on individual learner interpretations, varying learner agendas and histories, and unique learner motivations (e.g., Coughlan & Duff, 1994; Samuda, 2000). Even in focused tasks where researchers are interested in patters of performance related to a particular variable or task feature, learn-

ers and teachers will always exercise their agency, approach the task with unique interpretations and make their own mark on the task blueprint. Nonetheless, to date little attention has been given to exploring the desirable principle of giving learners themselves more agency in terms of driving task content and task design and determining what types of task content and structure they consider useful or appropriate. Shehade (2018) recently suggested that one of the immediate priorities in TBLT research should be to explore how far TBLT may be compatible with the principles of learner-centred teaching and thus learner agency but so far very few studies have taken this focus. Studies involving adults, such as the one by Lambert et al. (2017), shows that giving agency to learners has important positive effects. In this study the authors investigated the effect of learner-generated content (as opposed to teacher generated content) in a narrative task, and not surprisingly found, that 'tasks based on learner-generated content resulted in increased engagement as measured by the amount of task content contributed, the amount of time invested in performance, the extent to which content was elaborated, the extent to which content was negotiated, and learners' responsiveness during performance.' (p. 675). I would argue that we need more research into learners' agenda when it comes to task design and content across all ages.

4. Task-based studies with young learners

TBLT research with young learners has explored to date important language processing and language acquisition related issues such as how children deal with communication breakdown in peer interaction, how they negotiate meaning and give each other feedback. Other studies focused on how young learners' fluency/accuracy/complexity might be affected while working with simple gap tasks, how they help each other to complete collaborative tasks, and how they assess their own task performances. However, much less emphasis has been placed on affective issues such as how and why young learners are motivated to work with tasks and what types of tasks they want to work with, and when they enjoy working with a task what in particular motivates them.

Overall, the TBLT literature involving children closely resembles, even mirrors the agenda that had been set in the adult TBLT literature. Some early task-related studies with children focussing on exploring '*negotiation of meaning*' revealed that children, just like adults, were able to repair breakdowns via using meaning negotiation devices, especially in ESL contexts although very young children at the age of 6 are not yet able to negotiate meaning, as reported by Ellis and Heimbach (1997). Oliver (1995, 1998, 2000, 2002) described in some detail how 8–10 year old children communicated with peers and adults using simple

gap tasks. These studies indicate that children, like adults, negotiate meaning, give feedback and learn from task-based interactions but at the same time there are some important differences in their task performances when compared to adults. For example, Oliver (1998 and 2002) compared the interactions of children (between the ages of 8 and 13) and adult dyads using gap tasks, and found that younger children tended to use fewer comprehension checks than adults and older learners but used more self- and other repetition. This was interpreted as a developmental affect in that younger children were less concerned about the needs of their interlocutors but instead were rather more concerned about constructing and communicating their own meaning. Studies on the whole also found that children were able to listen to useful feedback given by their peers and act on it just like adults. For example, Mackey, Oliver and Leeman (2003) found that a group of young ESL learners (8–12 year old) produced more modified output following useful feedback from a peer than an adult. Studies such as Mackey and Oliver (2002) and Mackey and Silver (2005) on the other hand indicate that when young learners are paired with adults in task dyads they are indeed able to make full use of the adult interactional feedback moves. Van den Branden (1997) also provided evidence in Belgium that 11–12 year old learners of Dutch can negotiate meaning and modify their output to make it more comprehensible. Mackey, Kanganas and Oliver (2007) conducted a study where they compared how children worked with familiar or unfamiliar language tasks. This is particularly interesting in the sense that familiarity pre-supposes repetition, i.e., one becomes familiar with a task through practice and regular exposure to it. Their study showed convincingly that quite young children, who were just 7–8 years old, were able to produce more meaning negotiation, more modified output and generally took more risks with their talk when working with the familiar task although their ability to negotiate meaning is overall less developed than that of older learners. Much of this early research was undertaken in ESL contexts.

In EFL contexts studies with 10-year old Hungarian children by Pinter (2006, 2007) also indicated that children at a very low level of L2 competence were able to negotiate meaning, assist each other and complete a simple gap task or game (Spot the differences) successfully. In Spain García Mayo and her colleagues have been systematically exploring children's task performances in an EFL context comparing CLIL and non-CLIL classes. These researchers have focussed on the effects of task repetition on both L1 use and L2 meaning negotiation and have been accumulating evidence regarding the performance of EFL learners. Lázaro Ibarolla and Azpilicueta Martinez (2015) conducted a study with 7–8 year old children at a very low level of L2 proficiency, using a guessing game, and found that the children were negotiating meaning (like ESL learners) except that comprehension checks were barely used. However, even at this low level the children were still able to

use their L2, rather than falling back on their L1. García Mayo and Lázaro Ibarolla (2015) compared mainstream and CLIL classrooms (8–9 and 10–11 year olds) and found that CLIL groups used more clarification requests and repetition and relied less on L1 than the mainstream learners. Azkarai and Imaz Agirre (2016), building on the previous study and conducting research with the same group of children a year later, found, somewhat surprisingly, that all children negotiated meaning but the older children employed significantly fewer strategies than the younger children. The authors concluded that the tasks were probably too easy for the older groups thus their interactions required fewer negotiation moves. With regard to differences in CLIL and non-CLIL classrooms, García Mayo and Imaz Agirre (2017) conducted a longitudinal study and found that non-CLIL learners were more likely to employ meaning negotiation strategies as compared to CLIL learners. This may be a combined effect of the task type and the children's proficiency.

In more qualitative studies young learners' collaborative interactions have also been explored in tasks (e.g. Swain & Lapkin, 1995, 1998, 2001). For example, Swain and Lapkin (1995, 1998) worked with 11 year old French immersion young learners using a dictogloss task, where the children had to write a story together in pairs based on some picture prompts. In the process of thinking and writing together the children worked out language forms that they had not known before. Their collaborative dialogue contained numerous language related episodes (LREs) evidencing the process of mutual scaffolding and inter-thinking. In addition to exploring the patterns and features of children's language output, some researchers have focussed on exploring children's abilities to assess their own task performances. Following on from an earlier study (Butler & Zeng, 2011) where the researchers compared 4th graders and 6th graders' performances, Butler and Zeng (2015) set out to differentiate the effects of age and proficiency on children's interaction patterns as well their ability to self-assess their task-related performances. The results indicated that there are age effects at play since the older learners showed more mutual topic development, less formulaic turn taking and were more readily able to take their partners' perspectives into account both in L1 and L2 task performances. In addition, 4th graders rated their performance high across the board whereas 6th graders were more realistic in their assessment. The task-based self-assessment worked better with the older group of children.

5.   Task repetition and its benefits

In this section the focus of the review is more specifically on repetition studies in the literature to explore what benefits have already been documented for children. Task repetition is conceptualised and used by different researchers in differ-

ent ways. According to Ahmadian (2012) task repetition essentially means asking learners to repeat the same or a slightly different/ altered task at different intervals. When an altered task is introduced on a repeated occasion the structure or content is familiar but this is not verbatim repetition. Such repetition is referred to as procedural repetition. When the same task is repeated, the first performance is considered as preparation for further performances (Ellis, 2005). Task repetition in the child TBLT literature has been explored as a task condition that potentially impacts positively on accuracy, fluency and complexity of young learners' output but can also influence children's use of effective task strategies and their ability to relate to each other in collaborative tasks. There are numerous observations in the literature suggesting that task repetition is perceived by children as a source of motivation and confidence although very few studies have actually directly focussed on this.

The original theoretical premise that underlies task repetition is related to Levelt's (1989) argument about limited attentional resources in speech production. Given that in the second/repeated performance learners do not need to focus on the conceptualisation of their messages but instead they can devote more attentional space to formulation and articulation processes, the expectation is that their performance will become more fluent, more target-like or more complex (Bygate, 1996, 2001, 2009, 2018; Bygate & Samuda, 2005). The literature related to task repetition is also adult-oriented and adult-focused in the sense that the same sort of aspects of learner performance have been researched with children as with adults. The earliest studies were all conducted with adult participants. For example, with adult learners Bygate (2001) found substantial improvement in both fluency and complexity after repeating a storytelling task as late as 10 weeks after the learners' first encounter with the task. No effect however was found on accuracy although this was attributed to the conservative measure used to tap into accuracy. Bygate and Samuda (2005, p. 67) suggest that 'repeated encounters do not involve the learner in doing the same thing but rather working differently on the same material' and this is where the power of repetition lies. Others, such as Ahmadian and Tavakoli (2011) also found similar outcomes with fluency and complexity (but nor accuracy) after getting adult L2 learners repeat a story task. Lynch and Mclean (2001) investigated task repetition in an ESP class with the immediate repetition of the poster task, which involved talking about a project/ poster to various listeners in the same session. This type of repetition also led to marked improvements in both accuracy and fluency in the speakers' output. A more recent study with EFL adult learners in Japan (Fukuta, 2016) also suggests that task repetition with a narrative task helps to direct learners' attention to new aspects of language, in this case the second, repeated performance triggered learner focus on syntactic processing.

Overall, research with children using L2 task repetition is a growing area and more and more studies have been documenting children's L2 performances across task repetition. As mentioned already, Mackey, Kanganas and Oliver (2007) found that quite young children (7–8 years old) when asked to repeat a familiar task produced more fluent talk the second time around. Research clearly indicates that task repetition is effective with children as well. García Mayo and Imaz Agirre (2016) reported that the children in their study found the repetition engaging and they focussed on more LREs the second time. García Mayo et al. (2018) investigated the effects of task repetition with children (aged 7–9) using a spot the differences task (cowboy task) and found that it positively affected children's accuracy as well as their fluency. Azkarai and García Mayo (2016) working with 9–10 year old children using a spot the differences task found that the children did not use the L1 extensively and their overall L1 use also declined by the second encounter with the task. Although the results from these studies remain tentative and the authors suggest that much more research should be undertaken with different age groups and different types of tasks in different contexts, overall there is a strong consensus that task repetition has a positive effect. Kim and Tracy-Ventura (2013) reported that older children, 13-year-old Korean girls, were able to improve their syntactic complexity as result of repetition. Hawkes (2012) showed that 12–14-year-old Japanese learners of English were able to incorporate more target like forms into their role-play conversations the second time around after benefiting from a targeted consciousness raising activity between repetitions. Pinter's (2006, 2007) repetition study with beginning level Hungarian children also demonstrated that children got more confident, more fluent and more accurate across three repetitions of the same type of tasks (spot the difference and find the route on the map) and they got better at handling the cognitive difficulties hidden in the specific tasks as well as managed to take into each other's needs as listeners into account. More recently, Newton and Nguyen (2019) conducted an interesting study in which learners in Vietnamese classroom (somewhat older learners, aged 16) were asked to practise with tasks in groups in preparation for a public performance in front of the whole class. Practising for a public performance is also a type of task repetition. The particular research question was focused on whether the linguistic items targeted in LREs during the task preparation were in fact used correctly or not in the public performance (i.e., when the task was repeated in front of the class). The study found that indeed public performance 'pushes learners in rehearsal to engage in extensive language and form-focussed collaborative discourse' (p. 51).

Sample and Michel's study (2014) is noteworthy because of its dual emphasis on linguistic as well as affective influences of task repetition with children. They also used a spot the differences task with 9-year-old children and found encour-

aging improvements in fluency although results regarding accuracy and complexity were inconclusive. However, in addition to the linguistic benefits the authors (2014, p. 43) claim that 'repetition is a valuable pedagogic tool for young learners' because over three repetitions the children were able to focus on both meaning and form simultaneously, and they felt more motivated and confident as speakers. Repetition led to better cooperation between pairs and the children did not at all mind repeating the task, in fact 'rather their enjoyment grew over the repetitions' (p. 42). The authors argue that repetition allows these learners 'to stretch to their upper potential', which is an important pedagogic goal and it leads to increased confidence and self-efficacy. Moreover, repeated task interactions in pairs promote close collaboration, a need to listen carefully to each other and consider each other's contributions while using the target language without any interference from the teacher (Sample & Michael, 2014, p. 43).

Shintani's work (2012a, 2012b, 2014, 2016) with beginning level Japanese children has also demonstrated the power of repetition and its positive effects on learners' linguistic output but also on learners' motivation and confidence. Shintani used input-based tasks (such as 'listen and do' task) in her study. Ellis (2017, p. 510) claims that input tasks are ideal for beginners who lack L2 resources in terms of promoting incidental vocabulary and grammar learning. In Shintani's (2016) study through a meaningful repetition of the same task, students were able to negotiate meaning successfully and the teacher was able to gradually reduce the use of L1 and increase more complex L2 input. The learners were able to participate in meaningful communication and their motivation stayed high throughout the cycles of repetition. Shintani argues that even complete beginners are able to engage with tasks (input tasks) and they can develop the ability to use the target language meaningfully for genuine communication. Over time the learners were able to perform the task more easily, their comprehension improved and they were able to shape the task as active participants. Also, as they repeated the task, some children started to switch from being listeners to becoming producers of English even though they were never required to speak by the teacher. Shintani (2016, p. 158) claims that 'the students' motivation to engage actively in the tasks remained strong throughout. Their interest in performing the tasks was maintained even though the tasks were repeated nine times.'

6.   Repetition, agency and technology-mediation

Much evidence has already been reviewed above that suggests that procedural task repetition is not only beneficial from a linguistic point of view but it also impacts positively on the affective domain. What is also becoming clear is that technology-

mediated task repetition with the use of tablet devices has the capacity to magnify and accelerate these benefits.

Child second language education is only just beginning to explore the benefits of tablet devices in language learning. In an L2 context, Alhinty's study (2015) is noteworthy. In this study 20 children aged 9–10 who, were complete beginners of English, were paired up and given Ipads to share during English classes. The learners were encouraged to use the Ipads both in class and after class. They were invited to work collaboratively in pairs, with a range of educational apps during the English class and then they took the Ipads home to continue practising English at home with the same apps. Several children taught their siblings some English at home via using the apps. The researcher reports very positive findings, i.e., the children's collaborative learning of English with the apps was supported and enhanced by the affordances of the tool, and ultimately their motivation to learn English was also increased. The author comments that 'during their shared use of an Ipad, students were observed taking turns, passing the device, planning, discussing, negotiating, solving problems and helping each other' (p. 26).

Some useful research has addressed tablet use with very young children in kindergartens. For example, Khoo et al. (2015) reported Ipad use with young children and found that the affordances of the device, i.e., their suitability for capturing phenomena and then reviewing it for further observation helped the children to create their own learning resources. The children were reported to be scaffolding one another during Ipad use and they were particularly interested in co-constructing stories using the devices and sharing these with each other. While a child is working with the Ipad others observe and comment, discuss or contribute otherwise. In a study by Hatherly and Chapman (2013) kindergarten children were invited to create their own stories on Ipads and were also eager to watch and share these with each other. Due to the fact that Ipads blur the boundaries between physical and virtual realities, O'Mara and Laidlow (2011) argue that the device is immediately attractive to young children.

With slightly older children, Ness (2016) incorporated Ipads for repeated reading activities through a listen/record/reflect cycle based on previous research by Decker and Buggey (2014) and Robson, Blampied and Walker (2015). Ness reports that 'after video-recording themselves and watching these videos, students improved their fluency and comprehension and scored higher on measures of reader self-efficacy' (p. 612). Learners took control of the whole process as they independently selected texts to work with, i.e., text to read and record on the Ipad. Enthusiastic repetition of the task continued until the children were satisfied with their delivery. This simple feature of the device, i.e., the recording facility and the immediate opportunity to watch your own performance and re-record it if not

satisfied, closely resembles task repetition with the added bonus that both the linguistic and the affective benefits come together.

The process of re-recording your task performances is what Pellerin (2014, following Kahn, 2012) called a 'dynamic task' since the learners are firmly in control and they have the chance to shape their own learning via cycles of reflect/ record/ review. Dynamic tasks allow learners to interact meaningfully with their peers talking about the joint performance, but also to self-assess and regulate their own learning (Vygotsky, 1978). The digital record makes performance tangible and visible and it provides instant feedback. The revision process allows students to become consciously aware of their strengths and weaknesses. Listening to each other's contributions leads to conversations about what was coherent and what needed changing across recording.

In Pinter (2019) 9 year old children who worked in pairs (NS/NNS and NNS/ NNS pairs) used a 'dynamic task' whereby they video-recorded on Ipads their short presentations as many times as they felt necessary to 'stretch to their upper potential' (Sample and Michael, 2014) and in the process they spontaneously evaluated their joint performances in cycles of replay, reflection, re-recording. The children completed each other's sentences, agreed about who will say what, when to switch roles, they spontaneously corrected each other and suggested additional content after each recorded performance, prompted and encouraged each other with peer feedback and they deleted and re-recorded 3–4 versions of the presentations in quick succession. This simple cycle of recording/ reviewing and re-recording joint performances relies on one of the simplest functions of the device, i.e. video recording own performances. Beyond this basic function tablet devices can be used for learning purposes in many different ways but repetition and agency always play an important role. M-learning (MoLeNET, 2007) refers to the exploitation of handheld technologies more generally, and it presupposes active learners who can take control of their learning. Learners can work at their own pace, they develop a sense of ownership and naturally collaborate with peers. Research in this domain related to young learners is minimal and much needed.

TBLT and technology mediated language learning are claimed to share many important features. In fact both Gonzales Lloret and Ortega (2014, pp. 5–6) and Ziegler (2016) have argued that TBLT and technology mediated L2 learning and the underlying principles of practice are closely aligned. In technology-mediated interactions there is also a central concern with a focus on meaning and a clear communicative purpose. The technology-mediated activity is learner-centred requiring learners to draw on their own resources (linguistic and other) and learner experiences are authentic and real-life-like or holistic with regular opportunities for reflection.

Technology-mediated ELT research with young learners is in its infancy according to Majoral (2019) but is a developing area of research and practice. The most researched products are apps and here again repetition seems to be playing a key role. When a child is motivated to work with an app, they will return to it 'again and again with enthusiasm' (Majoral, 2019, p. 324). This is reminiscent of the description of a good language game with its momentum (Rixon, 1981). Research exploring children's engagement with online games (educational and other) also suggests that repetition and agency/ taking control are very important. Butler (2019) suggests that electronic games offer exciting new opportunities to learn L2 'precisely' because they offer learners self-directed engagement. Butler quotes Sykes and Reinhard (2013) who suggested that digital games offer opportunities for learner-driven use of tasks in L2. Learner-driven tasks presuppose motivated learners. Ryan and Deci's (2000) self-determination theory which suggests that individuals become intrinsically motivated if they can satisfy their 'innate psychological needs' which are self-efficacy, a sense of autonomy and a sense of connectedness to other people. Digital game playing can lead to such intrinsic motivation precisely because the above needs are met. Learners get better at playing the game through repetition and they are in control of what to improve, how to improve and how much practice is needed.

Researchers have also been interested in what measurable L2 learning can actually be evidenced in game playing and some scholars have specifically looked at vocabulary or grammatical structures in young learners' output. Only a handful of studies are available but overall the indications are that game playing can have a positive effect on language learning processes such as vocabulary (e.g., Aghlara & Tamjid, 2011) and grammar (e.g., Sadeghi & Dousti, 2013) learning. A study by Suh et al. (2010) with Korean young learners, for example, shows that playing a MMORPG (massively multiplayer online role-playing game) over a longer period of time had positive effects on the learners' language development. The interesting finding that emerges is that repetition plays a key role in children's game playing. Piirainen-Marsh and Tainio (2009) focussed in their study on game playing related language use with Finnish boys found that repetition was an important resource for engaging with the second language. In an innovative study where children were directly consulted about their opinions (Butler et al., 2014) as to what features of online games they valued most, i.e., what types of games were most fun to play, the children considered features such as repetition, autonomy, having control and having instant feedback as most important. These are exactly the elements that seem important in re-recording one's polished performance on a tablet device. More studies are needed to document children's L2 learning processes mediated by technological devices, and in particular it would be impor-

tant to uncover what happens between repetitions of the game/ task and how one performance, when reflected upon feeds into the next performance.

Many of the reviewed studies demonstrated clearly that where children had agency (such as in game playing interaction, or in repetitions where they were in control of the task, and in the case of dynamic tasks with the Ipads) the language task worked better, learners were more motivated, more focussed on the task and were more attentive to each other. In Butler's study where children were asked about features of good games, the author highlights the importance of children's wish for control and agency and suggests that 'teachers and curriculum designers might listen to children's voices in selecting and designing learning content so that tasks can promote children's personal investment in the learning process' (2017, p. 747). In addition to control and agency, these young learners incorporated repetition and greatly valued it: 'learners highly valued encountering the same words repeated in different sub-games. Having a slight variation on the process of repetition appears to be motivating for young learners' (p. 748).

7.   Positive psychological states

When learners repeat tasks or games with enthusiasm either online or in face-to-face interactions they enjoy special benefits of their positive psychological state. Oxford (2016) argues that being engaged in a meaningful task, being motivated and getting immersed in the 'flow', are some of the key components of wellbeing psychology. Both motivation and confidence come from being immersed deeply in the task. Csikszentmihalyi's (1990, 1996) flow is an experiential state characterised by intense focus and involvement that leads to improved performance on the task when levels of difficulty are optimal and the involvement is all consuming. Children working to repeat their task performances to push themselves to produce an outcome as good as possible is such an engaging activity. According to Czimmerman and Piniel (2016, p. 195) 'flow is most likely to appear when individuals are involved in well-structured and meaningful activities that offer a high level of challenge or which the learners have just the adequate skills to meet by making an effort'. Murphy's (2016, p. 339) study (albeit with adult learners) indicates the learners' task-focussed behaviours, especially those related to collaborative tasks tend to outperform self-focussed behaviours and these are seen as 'healthier'. Murphy suggests that 'an interactive-helping task-focused approach may help people who are overly self-focussed to break out of their negative effect and psychopathology and do a lot of good for others at the same time. When learners work together and help each other, you lose your self focus and you have

entered the territory of shared task-based joy and wonder.' More focus on research with children that aims to elevate their psychological state is also desirable.

8.   Implications for classroom practice

Research suggests that teachers experience considerable difficulties with the implementation of TBLT in primary classrooms (e.g. Butler, 2011; Carless, 2002, 2003, 2004; Deng & Carless, 2010). Ellis (2017) argued that designers of task-based courses will need to draw on both what research has shown about task complexity and on their own experience and intuitions of what constitutes the right type of task for a particular group of learners (p. 514), and, it would be only one further step to suggest that learners, including children should perhaps be invited to share their views and insights about which types of tasks they enjoy working with and why, what they learn from working with a particular task, what they prioritise and think about when they want to improve their performances across the cycles of review/ repeat and reflect.

Young learners' L2 classrooms aim to provide enjoyable, meaningful language learning experiences where learners are motivated to participate, practise and progress with their learning. Children spontaneously engage in repetition when they play, read stories, play games online or offline. In fact wanting to repeat a game or an activity is the sure sign that the first time it was fun. Agency, technology and task repetition do come together naturally in situations where children are encouraged to record/ video-record themselves either with mono-logic or dialogic tasks. Recording performances for some external audience or purpose is highly motivating and children will naturally want to show off their best performances, which means that they will be willing to practise again and again by deleting and re-recording their performances. Even at low levels of competence children should be encouraged to work with tasks such as recording mini-performances to start building confidence. Children can record a short (20 second/ 30 second long) description of a favourite photo or a drawing, or talk about their pet dog or cat, or give instructions about a game they enjoy to play. Recording collaborative tasks with a friend may include short puppet shows, simple dialogues or role-plays. Being able to watch one's own performance by reflecting on the actual recording will give children concrete tangible evidence that they can speak the L2, use connected speech (something that is often not encouraged enough by textbooks and syllabuses for child learners) and make themselves understood by others. Textbook designers may also be able to accommodate tasks rather than exercises and at the same time make use of the power of repetition, reflection and meaningful, motivated language practice.

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