Are digital learning paths sufficient for learning/practising English grammar? Views of secondary school pupils

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Abstract

This study aims to investigate 80 grade 6–10 secondary school English as a Foreign Language (EFL) learners' opinions in Germany about the extent to which they consider Digital Learning Paths (DLPs) sufficient for acquiring or refreshing their English grammar knowledge. The learners were given one to two grammar-focused DLPs, depending on their grade and language level, to complete during their English classes. Upon completion, learners participated in an online survey. Research data were collected in October 2022 using an online survey. Interestingly, results from 80 learners showed that for half of the respondents, the DLPs were sufficient to learn or practise English grammar, but the second half of the respondents indicated that they would prefer DLPs to be integrated into grammar lessons at school. This is because these learners prefer to have additional explanations from the teacher. This case study shows that it can help promote DLPs as an alternative teaching method and encourage EFL teachers to deliver their English grammar lessons in a more engaging and sustainable format.

Keywords: *autonomous learning, English grammar, EFL, secondary school learners, digital learning paths.*

1. Introduction

This study aims to determine grade 6–10 secondary English learners' perceptions on the extent to which they consider DLPs sufficient for acquiring or refreshing their English grammar knowledge. An extensive online literature search found no research on the integration of DLP in the teaching of English grammar in secondary education. As part of the project *Sustainable Integration of Digital Teaching and Learning Concepts* (InDiKo, 2020-2023), the English Department at the Karlsruhe University of Education, Germany, developed the concept of teaching English grammar through DLPs. In particular, the English Department designed the seminar, *Media Didactic Competence: Learning Paths and Digital Storytelling for Grammar Teaching*, in which pre-service English teachers learn how to construct DLPs to teach grammar more interactively and effectively. These DLPs are then taken to secondary schools to be tested with English learners.

In many contexts, it has become common for learners to use tablets in class (Bjørgen et al., 2021) and do their homework online (Magalhães et al., 2020). Suddenly, however, the outbreak of the COVID-19 pandemic in early 2020 urged instructors, policymakers, and education institutions to acknowledge the importance of developing new concepts for using digital technology and virtual learning platforms to support distance learning. Many

education institutions worldwide have started implementing "Emergency Remote Education" (ERE) (Hodges et al., 2020) by using asynchronous learning and remote synchronous delivery, a combination of synchronous and asynchronous teaching formats.

The sudden need to adapt to online teaching and learning due to the COVID-19 outbreak challenged teachers' and learners' digital literacy, as the majority were unfamiliar with the concept and nature of distance learning (Crawford et al., 2020). Such a situation often results in learners being unable to engage with the asynchronous learning materials, which can lead to them being unable to follow the course (Bedenlier et al., 2021).

Given the fact that pupils reacted positively towards the DLP-based English grammar lessons, according to our previous studies (Busack, 2023), it was decided to look more specifically into the preferences of today's generation of "digital natives" (Prensky, 2001), i.e. to find out whether learners prefer to learn English grammar completely online or with live synchronous input and interaction with the teacher.

In particular, the focus is on DLPs that are built on the six levels of Bloom's Taxonomy, namely, recall previously learned information, understand new facts, apply knowledge to current situations, analyse ideas into simpler parts, find evidence to support generalisations or evaluate information to construct alternative solutions, and produce artifacts. Teachers who use Bloom's Taxonomy aim to help learners develop higher-order thinking skills by assisting them in practising their lower cognitive skills.

The innovative aspect of DLPs lies in their multimodality, i.e. their ability to cater for multiple learning styles and language levels simultaneously, and finally, their ability to provide ubiquitous learning in a safe, teacher-controlled learning space. As for the role of digital storytelling in DLPs, it is used to stimulate learners' curiosity and create a more entertaining and participatory language learning experience.

This study intends to fill in the aforementioned gap in the literature and to answer the following research question: are DLPs sufficient for secondary English learners to learn/practice grammar, or do learners prefer the DLP to be part of the grammar lessons, together with other materials from the teacher?

2. Method

2.1 Context and participants

The DLP-based grammar lessons were conducted at a secondary school in Baden-Württemberg, Germany. In terms of context, the school teachers chose one of the grammar-focused DLPs that our pre-service teachers had prepared and combined it with their own learning materials and activities (e.g. pre-DLP activity and post-DLP activity) to deliver the grammar lesson. The pre-DLP activity usually consisted of questions to help English learners familiarise themselves with the content of the DLP, while the post-DLP activity usually consisted of a task where pupils had to use the specific grammar phenomenon to produce an artifact or output, such as a letter, diary entry, etc. Each lesson lasted 60 minutes and took place in the school computer room. Each learner was provided with a computer and a headset. At the end of the lesson, learners were asked to complete an anonymous online survey to give their impressions.

The sample included 80 EFL learners with an age range of 11-15 years. These learners were studying in the grades 6, 7, 8, 9, and 10. There were 47 boys and 33 girls with different language proficiency levels and learning styles. They have been studying English at school between three and seven years.

In this particular school, English grammar is taught primarily by books and non-digital materials supplied by the teachers, resulting in limited ways to accommodate students' diverse learning preferences and abilities.

2.2 DLP material and procedure

A DLP is an internet-based learning path that provides a series of coordinated tasks through interactive materials that can help learners develop the habit of independent and self-directed learning while working towards a specific learning goal. In addition to visuals, it is also possible to use audio-visuals to support learning (Windler & Wolf, 2021).

According to Schmidt (2009), DLPs' ultimate goals are; 1) knowledge acquisition in terms of completing a transferability task and applying the newly gained knowledge in a related day-to-day exercise example, and 2) cognition in the sense of being able to reflect on one's own learning, i.e. on the connections between the previously acquired knowledge and ideas used in reasoning to reach the acquisition of the new piece of knowledge.

DLPs, as long as they are embedded in a pedagogically meaningful way, can be a supportive tool for learners both in the classroom and at home (Schmidt, 2009). They can include Word, Excel, and PowerPoint documents, pictures, web pages, links, memos, and activity items, such as polls, tests, quizzes, tasks, discussions, etc. (Busack, 2023). The DLPs of our pre-service teachers included interactive grammar exercises like true/false, fill-in-the-blanks, matching exercises, etc. Learners could access the grammar activities according to their level (basic, intermediate, advanced) based on their results from previous exercises, using an automated marking system, or they could freely choose the activities they wanted to do based on their perceived proficiency level. The formative assessment feature allowed learners to review their answers and receive feedback anytime. Furthermore, our DLPs presented grammar theory multimodally, such as images, videos, and audio files. An educational agent (non-moving avatar or character) was also present to make the DLP more attractive. The DLP topics included: conditional clauses 0, 1, 2, and 3; relative clauses; simple present and present progressive, will future and future continuous, simple past, present perfect, past perfect, and future perfect tenses; reported speech; and active and passive voice. The DLPs created by our pre-service English teachers are hosted at the University's learning management system *Innovation Space*. To see how our DLPs look in action, please scan the QR code in the appendix. These DLPs are structured upon Bloom's Taxonomy, a useful checklist to ensure that each level of grammar learning is assessed and appropriate assessment techniques are used in the classroom.

2.3 Data collection and analysis

As we wanted to collect responses from a large number of participants, we decided to use a quantitative research design, so the instrument used to collect the data was an anonymous online questionnaire given to each English learner at the end of the DLP-supported English grammar lesson. The anonymity was intended to help participants give honest feedback. The questionnaire consisted of 15 closed- and open-ended questions. The data were analysed using the statistical software Jamovi.

3. Results

Answers in the online survey surprisingly revealed that 40 (50%) English learners would prefer to learn or practise English grammar autonomously through DLPs, while the other 40 (50%) English learners stated that it would be better for them to integrate the DLPs into the English grammar lessons at the same time while benefiting from teacher's presence and their explanations (as demonstrated in Figure 1).

Further responses to the survey revealed that the pupils enjoyed the formative assessment function and the ability to check their answers instantly. They also found the learning agents to be a great idea as they were considered learning aids with the narrative background that the lesson follows, making the otherwise dull grammar lesson engaging and student-centered. Furthermore, pupils appreciated the interactive exercises and the DLPs that used videos and comics in their content. Several responses from the questionnaire are listed below:

- "It's very important for me that I get a direct explanation of what went wrong."

- "Getting positive comments for my correct answers motivates me."

- "It's very interactive."

- "It's motivating and makes learning not seem so lonely and boring."

- "I like DLPs because you can interact directly with exercises. "

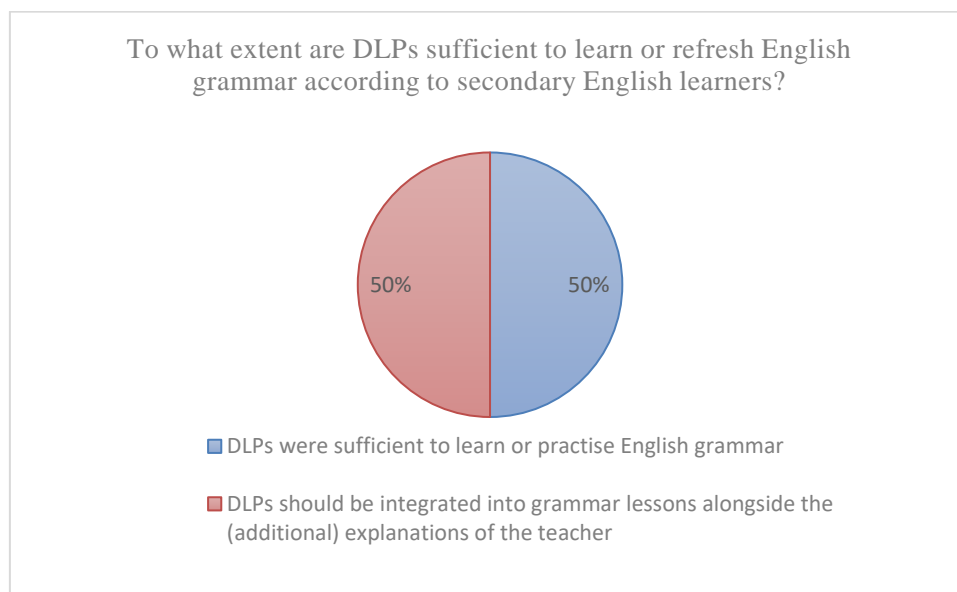- "I like that you get to do something yourself."

Figure 1. The extent to which DLPs are sufficient for the learning or refreshing of English grammar according to secondary English learners.

4. Discussion and conclusions

This study explored how far DLPs are considered sufficient for learning/refreshing English grammar knowledge by secondary school EFL learners. The study's findings imply that our sample is torn between having DLPs as the only way of learning/practising English grammar, and having DLPs as part of the English grammar lessons but combining them with learning materials and explanations provided by their English teacher.

The study moreover found that English learners generally appreciated the fact that using DLPs allowed them to check and correct their answers anytime, without waiting for the teacher to find time to correct them, and DLPs' scenario-based learning feature, which made them curious about the end of the story and willing to go through the exercises to find out more about the lesson.

In summary, these findings suggest that even though the current generation of learners are known as "digital natives" (Prensky, 2001), it cannot be taken for granted that they are all equally comfortable with autonomous digital learning. On the one hand, some learners may be more autonomous and want to take charge of their learning by exploring the given digital context. On the other hand, other learners would still need guidance in their learning and therefore seem not to welcome those parts of lessons that are being delivered asynchronously. Based on the finding that 50% of our sample decided that it would be better to combine DLPs and teacher's simultaneous explanations, this may be due to students' traditional mindset and difficulty in adapting to self-paced and digital learning. In this sense, the learners may think that having the teacher always present when trying to practise or learn a (new) concept makes them feel safe in their learning. Ultimately, based on the result of the first 50% of our sample, it can be assumed that pupils who have a positive attitude towards online learning will be more enthusiastic about using self-access and virtual learning materials than those who do not prefer online learning.

A further study is planned as an extension, teaching English grammar only via DLPs over a six-month period and seeing how grade 6-10 EFL learners' attitudes and academic success develop. Future studies could involve participants from other schools in different countries to contribute to the comparability and generalisability of the results. Moreover, conducting a study to combine surveys with structured interviews (mixed methods) to better

understand the relationships or inconsistencies between the qualitative and quantitative data in the surveys could help make the findings more generalisable.

Acknowledgments

Appendix

Guest key: 3juqYON&z@QHkg;&97Is

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