

Online Practices for Teaching English Grammar in Higher Education: Combining the flipped classroom with digital learning paths

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Abstract

This study investigates whether the combination of digital learning paths (DLPs) and the flipped classroom can help pre-service English teachers improve their grammar and meet the communication and social needs of the post-COVID era. To answer the question, the seminar “Development of media-didactic competencies: Learning Paths & Digital Storytelling for Teaching English Grammar”

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was offered as a flipped classroom with a synchronous part (webinar) and an asynchronous courseware part in the form of DLPs. Data were collected on the extent to which the combination of DLPs and the flipped classroom helped pre-service English teachers improve their grammar and meet the communication and social needs of the post-pandemic era through an online post-grammar test and an online course evaluation survey at the end of the seminar. The results showed that 100% of participants improved their grammar knowledge and 87% confirmed that they had benefited from a seminar that involved continuous reflection and a plausible relationship between technology and pedagogy. The results of this study will encourage instructors to use the combination of DLP and webinars to enhance their teaching whenever classroom teaching is impossible.

Introduction

As a result of the COVID-19 pandemic, educational institutions at all levels have had to make significant adjustments to their learning, teaching, and assessment methods to adapt to the rapidly changing circumstances. In the realm of Higher Education (HE), a staggering 95% of universities in Europe had implemented lockdown measures and swiftly transitioned to online teaching by the end of March 2020 (European University Association, 2020). A considerable number of language teacher trainers were directed to adopt a fully asynchronous approach to instruction. This involved uploading learning materials and pre-recorded lectures onto the institute's Learning Management System (LMS) or delivering them via email. As a result, the emphasis was primarily placed on non-verbal learning, with an emphasis

on writing, reading, and listening skills. Unfortunately, the development of speaking skills was often overlooked. While grammar, for instance, could be taught online through the provision of theory, exercises, and written practice, this approach primarily focused on rote memorisation of rules. These observations are further supported by the research conducted by Schaffner and Stefanutti (2022) and Öztürk-Karatas and Tunce (2020). Their findings indicated that 52% of respondents stated that speaking skills are better taught in face-to-face classes, and accordingly 64% of pre-service English teachers expressed that asynchronous online English courses are not conducive to effective speaking practice. The value of communicative grammar instruction lies in the fact that the act of speaking a language assists learners in transferring their understanding of grammar from the recesses of their minds to the forefront, or from 'slow memory' to 'quick memory' (EF English live, n.d., para.4). It is crucial for pre-service English language instructors to possess fluent and precise speaking skills in the language and for the context they intend to teach. This proficiency encompasses both accurate pronunciation and grammatical structure.

The COVID-19 pandemic showed within the first few weeks that neither instructors nor students were prepared for the sudden change to online teaching. At the same time, instructors realised that teaching is not just a one-way delivery of information through an LMS, but that it involves much more, such as the interaction between the information delivered and the students, and between the instructor and the students. We can speak of two types of learners: those who thrive on working alone, knowing that they can access the information, complete the tasks and exercises at their own pace, and stay focused throughout the course, and those who prefer to work as part of a learning community and enjoy knowing

that they are not alone in their journey. The second type may find it difficult to stay motivated throughout the course without opportunities to interact with their peers and instructor.

Hodges et al. (2020) together with Gacs et al. (2020) argue that the shift to online teaching in HE institutions in March 2020 was not a fully developed transition, lacking the necessary pedagogical considerations and preparations for teaching languages online. The move to online learning simply extended what would have been covered in traditional classroom settings in the absence of a pandemic (Schaffner & Stefanutti, 2022). In numerous HE institutions, the shift to online learning has presented an opportunity for the advancement of flexible learning methodologies (Divjak et al., 2022). Consequently, many institutions have explored the implementation of the flipped classroom instructional approach. However, it is crucial to recognise that the availability and utilisation of technology infrastructure on campus, as well as the prevalence of online instruction, also influenced program readiness. This led to certain institutions having to delay learning and teaching activities due to insufficient information technology infrastructure for educators (Schaffner & Stefanutti, 2022; Crawford et al. (2020)). It was not enough for universities to possess robust information technology infrastructure; it was equally important to ensure that data protection was safeguarded by the platforms and applications used for online teaching. In Germany, universities have been deliberating on the varying levels of privacy protection provided by different web-conferencing platforms (Kissau et al., 2022). Moreover, the introduction of novel pedagogical approaches to online teaching, which may be unfamiliar to instructors, must be acknowledged. In Germany, for example, a number of universities had enlisted the expertise

of e-learning specialists to conduct online teaching workshops for faculty members, along with monthly online teaching forums for sharing strategies (Kissau et al., 2022).

Like countless universities around the world, the Karlsruhe University of Education had to implement emergency remote teaching and learning (ERTL), also known as emergency remote education (ERE), and immediately change the delivery mode of its courses from face-to-face to fully remote. ERTL was a temporary shift in the delivery of education to an alternative delivery mode due to crisis circumstances. This includes using fully remote solutions for teaching and learning that would otherwise be delivered in-person, blended or hybrid. Unlike normal distance education, ERTL's primary goal was not to recreate a robust educational ecosystem, but to provide temporary access to education and educational support in a way that is quickly established and reliably available during emergencies or crises (Hodges et al., 2020). The university's English department's seminars delivered the use of fully remote teaching and learning solutions. However, as the semester progressed, it became apparent that students were not participating in group work as they should, preferring to work individually rather than interacting with their peers (whom they had never met before). They were unmotivated to follow the content and stated that they felt alone very often. We strongly believe that peer-to-peer interaction, as well as instructor-student interaction and group work, can enhance and complement student learning and even lead to better learning outcomes. It was therefore decided that in the post-COVID era, the seminar would move from a fully remote delivery to a remote synchronous delivery (RSD), where the seminar would be delivered using the flipped classroom (see part 2 of the Background section).

The research question that this study attempts to answer is: Can the combination of DLPs and the flipped classroom help pre-service English teachers improve their grammar and meet their communication and social needs in the post-pandemic era?

This book chapter consists of two main parts. The first part presents the context and the theoretical background, whereas the second part describes the material, sample, process, and method, as well as the study results and their discussion. The article concludes by summarising the findings and suggesting ideas for future research.

Remote Synchronous Delivery (RSD)

RSD is a model of remote teaching that has been used to move from face-to-face teaching to live online sessions, particularly after the outbreak of the COVID-19 pandemic (Cicha et al., 2021) when online teaching sessions became the new classroom reality. RSD takes the form of a series of pre-arranged webinars. Its main aim is to provide students with the least possible disruption to the learning process, so it is a good way to quickly change the way a class is run and mimic the face-to-face classroom experience (same class length, date, and time, and attendance requirements) on a videoconferencing platform. Such an approach needs to include the adaptation of the pedagogy that accompanies the class, such as the structure of the lecture format, physical activities, interactions, and considering the possibilities and limitations of online teaching and learning (Henriksen et al., 2020).

Flipped Classroom

We decided to deliver our online course on a flipped classroom basis, which is a blended learning model (a combination of synchronous and asynchronous teaching and learning sessions). It

is a didactic concept that makes learning content available in a prepared form before the classroom event. The reason for choosing the flipped classroom approach is that we wanted to use the time together in the online ‘classroom’ for practice and application. The flipped classroom aims to create more space for interactive collaboration with learners and to shift traditional frontal teaching to self-learning (Kim et al., 2014). In a flipped classroom environment, students start the course by learning concepts and skills asynchronously. Learning can occur in a variety of ways, including watching videos, reading, doing interactive online activities, and taking quizzes. All work is completed prior to the synchronous component of the course. The synchronous component involves learning with tutors and peers and provides an opportunity for students to come together and explore complex tasks, solve problems, and build knowledge. The key to supporting learner motivation in online or blended learning environments is interactivity, which in this context refers to the ability of learners to be socially and cognitively engaged in interacting with content through learning materials, interacting with peers, and interacting with instructors (Anderson, 2003). In accordance with this classification, collaborative formats such as discussion, feedback, and small group work have a higher potential to support students’ social interactions and engagement.

Digital Learning Paths (DLPs)

A DLP is an internet-based learning path (LP) that provides a series of coordinated tasks through interactive materials which can help learners develop the habit of independent and self-directed learning while working towards a specific learning goal. Besides visual formats, audio-visual formats can also be used to support learning (Windler & Wolf, 2021). DLPs can be a

support tool for learners both in the classroom and at home as long as they are embedded in a meaningful way. DLPs can include Word, Excel, and PowerPoint documents, images, websites, links, notes, and activities like surveys, tests, quizzes, assignments, and debates. DLPs can also be implemented completely in the form of the flipped classroom concept, but learning phases can also alternate between digital media and traditional teaching methods (Roth & Wiesner, 2014). With transparent goals and expectations (Roth 2015), students can plan and organise their learning in time, process, and effort (Konrad & Traub, 2009). In addition to self-organised and independent practice and learning, an LP may ensure transparency of learning and performance expectations and provide differentiated support to students (Hessisches Schulportal, 2016). There are several ways in which DLPs can be used in the classroom. They can be used to introduce a new topic, for independent work or open-ended learning, to check learning objectives or exit from a topic, or they can simply be made available to students as an optional extra (Schmidt, 2009).

DLPs can be seen in these forms:

- Linear or expository arrangements, in which the learning content is presented in a prescribed, sequential order and in which students have relatively little choice about how they proceed.
- Branched or exploratory arrangements, where the emphasis is on the learner and their individual learning needs. Content can usually be explored via hypertext rather than sequentially by the learner.
- Complex arrangements where, depending on the learning scenario (usually problem-oriented and cooperative), the focus is on developing complex skills and

reaching the meta-level, reflecting the group's individual learning processes.

Methods, Materials, and Process

Research method

A mixed methods research design was conducted for this study. The purpose of choosing this type of research design was to arrive at a more robust conclusion, to address the weaknesses of one method through the use of the other, and to make it easier to generalise findings compared to the use of only qualitative research designs. Specifically, the study was based on the convergent parallel mixed methods research type, as our aim was to collect both quantitative and qualitative data at the same time and to analyse them separately.

Data was collected through an online post-grammar test and an online course evaluation survey consisting of 26 closed and open-ended questions about the content and overall delivery of the seminar. The content analysis method was employed to analyse the qualitative textual data. This methodology was especially effective in identifying and comprehending the themes, patterns, and associations existent in students' answers. Furthermore, it was helpful for exploring the extent to which the data can inform the theoretical claims present in research studies and contributed towards the quantification of the qualitative data.

Sample

The sample consisted of 29 pre-service teachers of English for secondary school who were on their master's course at the Karlsruhe

University of Education during the summer semester of 2022 and the winter semester of 2022–23. Specifically, there were 5 men and 24 women between the ages of 21 and 30.

Grammar test

An online grammar placement test was used pre- and post-seminar, containing 60 multiple-choice exercises to determine the pre-service teachers' level of grammar. With the help of this placement test, pre-service teachers would be placed in a level between A1 and C2 of the Common European Framework for Languages. The most frequent grammar mistakes made during this pre-grammar test determined the grammar topics taught during the seminar as well as the topic of the DLPs that the pre-service teachers constructed at the end of the seminar.

DLPs

The DLPs used for teaching grammar to pre-service teachers were structured according to the learning stages of Bloom's Taxonomy (knowledge, comprehension, application, and analysis or synthesis or evaluation) and were created in the university's LMS 'Innovation Space'. Our DLPs included interactive grammar exercises such as true or false, fill in the gaps, matching exercises, etc. Based on an automated scoring system, the pre-service teachers would only be able to access the grammar exercises according to the level (basic, intermediate, advanced) in which they were placed based on the points they had accumulated so far from the previous exercises. This tiered structure of exercises was complemented by the formative feedback function, which allowed students to check their answers and receive feedback at any time. In addition, our

DLPs tried to present grammar theory in a multimodal way, such as pictures, videos, and audio files, and placed the grammar in a digital storytelling framework, sometimes with a pedagogical agent, in the hope of increasing the attractiveness of DLPs.

Seminar

The seminar “Media Didactic Competence: LPs and Digital Storytelling for Grammar Teaching”, in which these DLPs are produced, is part of the InDiKo project “Sustainable Integration of Digital Teaching and Learning Concepts”, which started in May 2020 at the Karlsruhe University of Education (InDiKo, 2020–2023). The university’s English department is also involved in the project and focuses its research on developing the media-didactic competencies of pre-service English teachers, while at the same time measuring their grammatical competence development, hence the creation of this seminar.

The synchronous phase of our seminar took the form of a weekly webinar that took place on the same day and time. The university decided to use the open-source web conferencing system BigBlueButton to replicate face-to-face teaching, and so did the English department. During the live sessions, the instructor used a grammar-based DLP (that was focused on a specific grammar topic and structured according to Bloom’s Taxonomy) and taught his/her lesson by guiding the students through the DLP, which usually included group tasks, polls, brainstorming sessions, role-playing exercises, videos, pictures, quizzes, debates, etc., as they would be done in the classroom. The instructor was there to discuss the previous and new material and answer questions. During the exercises, students could use timed virtual breakout sessions to discuss and then return to share their ideas

and conclusions. The final phase of the DLP would usually be for students to argue about the use of one grammar tense over another, to evaluate another grammar-focused DLP in terms of didactics and instructional design, or to start synthesising their own concepts for creating their own grammar-focused DLP in pairs (which they would also implement as a DLP on Innovation Space by the end of the seminar).

The asynchronous phase (courseware) of the seminar was in Stud IP, the virtual learning environment already in use at the university. It contained DLPs focused on technological pedagogical content knowledge theory, which included theory, quizzes, exercises, discussion areas, and additional readings to enrich students' knowledge and prepare them for the upcoming webinar. In addition to sending emails, the communication channel between students and between students and the instructor was always part of the DLPs to ensure a constant connection. Students could use this forum to ask their instructor questions and post and discuss answers with their peers depending on the requirements of the assignment. Another very important part of the DLPs found in the courseware is the reflection area, where the pre-service teachers were asked to reflect on the grammar focused DLP they engaged with during the webinar in terms of media didactics.

Results and Discussion

This study was conducted to investigate whether combining DLPs with flipped classroom can help pre-service teachers improve their grammatical knowledge while meeting their communicative and social needs in the post-COVID era. The results will be separated between grammatical knowledge and communicative and social needs.

Grammatical knowledge

The results of the online post-grammar test showed that 28 pre-service teachers (95,6%) improved their knowledge of English grammar during the seminar and scored much better than in the online pre-grammar test (moving from the 60% range to the 70% range), while one pre-service teacher (3,4%) scored the highest in the class (in the 80% range).

Communication and social needs

The online course evaluation survey revealed that 87% of students stated that they had profited largely from the way our seminar was conducted. The remaining 13% said that they were satisfied with the way the seminar was delivered but would not mind if it had been delivered completely asynchronously like the other seminars. By analysing the students' responses, 3 themes were identified: Dialogic learning, organised learning as well as interpersonal and community learning. Here are the most representative answers used by the pre-service English teachers when filling in the survey:

For organised learning:

“The fact that all instructions, materials, and assignments were included in a single DLP made my learning more organised.”

“To me, DLPs are a pleasant way to go through the learning unit smoothly.”

Organised learning is defined as “planned in a pattern or sequence with explicit or implicit aims. It involves a providing agency (person(s) or body) that facilitates the learning environment, and a method of instruction through which communication

is organised. Instruction typically involves a teacher or a trainer who is engaged in communicating and guiding knowledge and skills with a view to bringing about learning” (Eurostat, 2016, p.15). DLPS can be employed as a means of providing a comprehensive repository for learning materials, encompassing (additional) theoretical content, (supplementary) exercises, and communication forums. This approach facilitates the integration of individual and group or pair learning, as well as student-lecturer communication, within a single digital platform, enhancing the efficiency of the learning process. The instructor has structured the DLP in a systematic manner, aligning the content and learning objectives with the knowledge to be transmitted.

For dialogic learning:

“Being shy, I often feel hesitant to share what I think with many people. The small breakout rooms and discussion forums were very important for me to have.”

Dialogic Learning encompasses “a range of discourses concerned with the learning that happens within and through dialogue” (Davis & Francis, 2024, para. 1). The utilisation of online synchronous breakout rooms affords students the opportunity to engage in discourse within smaller groups, particularly those who may be more reserved. This setting allows them to express their opinions freely, with the understanding that their contributions will be confined to the in-group and not disseminated beyond. Additionally, as shy students may be reticent to express their opinions in class, this setting provides them with a space to do so, encouraging them to become more active participants in the learning process.

For interpersonal and community learning:

“The synchronous environment allows for a more fluid personal interaction and makes you feel like you are sitting in the classroom with your peers.”

“The combination of synchronous and asynchronous learning environments was very important. It helped us to feel much more like a community working together towards the same goal. Being able to exchange ideas and opinions while seeing each other online made the learning environment so much better because you could put a face to a name.”

“Compared to other seminars which are still delivered entirely at a distance, the opportunity to work with others in a synchronous meeting in pairs or groups reduced the feeling of loneliness on my student journey and increased the feeling of being connected with my fellow students.

“I liked that every DLP has a forum, where we can post questions that we may have at any time even after the class. Starting discussions with my peers and our lecturer can be very stimulating for my learning.”

“With the live webinars and the communication forum, I never felt absent from lessons. It felt like I was in a virtual class, and I had everyone around me. It was like being in class but at home.”

“It was as if we were going to school, but we were home. At first, I was worried about doing an online course and thought it would be different from a classroom course. To my surprise, I found that we quickly developed a sense of community and excitement that made learning enjoyable.”

Interpersonal learning and community-based learning are in favour of the students who thrive in working through issues,

ideas, and problems within a group [the social (interpersonal) learning style, n.d.]. In our context, students in the online synchronous classroom were intrinsically encouraged to participate in joint discussions and activities that facilitate the improvement of their skills and knowledge (Community-based learning, 2014). This approach benefits the entire community, with the goal of enhancing their English grammar knowledge, in our case.

With regard to previous studies, the findings of this study correspond with those reported by Salman et al. (2021). Their study was conducted with the aim of exploring student and teacher preparedness, delivery approaches, student engagement and activities, and evaluation and assessment in an RSD environment. Their findings confirmed that in “collaborative assignments, students felt a stronger connection with their partner through the RSD process versus in class as students had to schedule regular Zoom meetings to connect daily” (Salman et al., 2021, p. 287). They also reported that despite being taught in an RSD environment, there were still students who reported feeling lonely at times. This is not reflected in the results of the current study. However, it is understandable that for some students RSD cannot completely replace face-to-face teaching, as being on campus is also a sign that they need to start concentrating and preparing for their upcoming classes, something that some students might miss if they are only taught at home. Breakout rooms possess the capability to enhance motivation, efficiency, foster student connections, and instill the self-assurance required for active participation in meaningful discussions (Cadieux et al., 2020; Saltz & Heckman, 2020). According to the research conducted by Douglas (2023), it was discovered

that students exhibit a higher tendency to express their thoughts and provide explanations when engaged in breakout room activities. Specifically, the study revealed that 20% of the participants stated they would consistently share their ideas, while 47% mentioned they would frequently do so. Additionally, 26% of the respondents indicated they would occasionally share their thoughts, whereas only 4% mentioned they would rarely engage in such discussions (Douglas, 2023).

In their study examining the lessons learned from the RSD model and its impact on students, teachers, and administrators, Antohi-Kominek and Salman (2021) also confirm that “students who are engaged participate in the class activities and perform equally well as in a face-to-face equivalent course. Those students who have previously experienced asynchronous online courses have commented that they wished online courses would be more like RSD courses” (p. 244). This combination of synchronous and asynchronous learning encourages students to interact with the materials and activities on the LMS platform, both with the instructor and with their peers (Tobing & Pranowo, 2020). In an RSD environment, instructors can use a variety of strategies to replicate onsite teaching and learning situations. For example, weekly discussion questions and forum posts on topics related to the course, role-playing exercises, debates, brainstorming sessions, think-pair-share, team-based case study discussions, problem-based learning exercises, as well as online breakout rooms during synchronous sessions can create valuable and engaging classroom learning experiences and ultimately help to foster a sense of collaboration and teamwork as students would experience in an on-campus classroom setting (Singh et al., 2021).

Conclusion

This study was designed to investigate whether DLPs combined with flipped classroom could help pre-service English language teachers develop their grammatical knowledge and meet their communication and social needs in the post-COVID era. It found that in the new reality of online teaching and learning, the combination of DLPs and flipped classroom with the help of synchronous webinars can prove to be an effective combination of approaches to support the teaching of English grammar to pre-service English teachers, while also contributing to the satisfaction of their communication and social needs. Taken together, these findings suggest that the use of DLPs and webinars can provide a more organised type of teaching compared to face-to-face teaching, whereas the small, timed breakout rooms, as well as the discussion and reflection areas, can be ideal and have a positive effect on shy students who are reluctant to share their thoughts in face-to-face classes, thus increasing individual engagement.

However, the use of digital media is not in itself conducive to learning. It does not directly suggest a better way of learning, nor does it automatically address students' need to be part of a community and to interact with their peers. It depends on the didactic embedding. Therefore, changing a course's mode of delivery does not only mean changing the format of the learning material, but more importantly, it means changing the pedagogy that accompanies the new course, in terms of how the learning material can best be communicated (knowledge) and how students interact with each other and with the instructor to process this material (social interaction).

Future research could focus on better understanding the learning, teaching, and social factors involved in planning and delivering DLP and webinar-based classes. Specifically, future research could explore the various pedagogical approaches that can complement this innovative combination, aiming to enhance both communicative practices and further develop tailored course design theories for instructing pre-service English teachers in English grammar in the post-COVID era.

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Appendix

DLP no. 12



Guest key: Group12

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