

## **Learning and Teaching German for Beginners Online At UNAM During The Covid-19 Pandemic**

*Julia Augart*<sup>1</sup>

### **Abstract**

*Covid-19 has affected learning and teaching worldwide and forced most learning institutions to shift almost instantly to remote or e-learning. Although e-learning and the use of technology to support and enhance learning has been promoted over the years, the pandemic challenged many, institutions, lecturers and students alike. Learning a foreign language through a language app has become extremely popular as it is easily accessible and flexible in regard to time, but speaking, interaction and motivation cause challenges.*

*As the University of Namibia (UNAM) changed with the beginning of the pandemic to online teaching, the teaching and learning had to be changed in methods and activities and material had to be developed as online takes a different approach. For the German beginners' class different tools have been employed such as recorded Panopto sessions, online exercises on Moodle, videoconferences on Zoom and WhatsApp communication to facilitate the course online, but also activities such as quizzes, video presentations were used to support students' language learning and to enhance interaction.*

---

<sup>1</sup> Julia Augart is Associate Professor in the Department of Language and Literature Studies (German Section) at the University of Namibia. She specialises in German literature and German language. Her current research focuses on crime fiction, Namibian-German literature as well as foreign language learning. Email address: jaugart@unam.na

*In conclusion, one can say that e-learning offers many advantages to develop a digital competence and to allow a more flexible learning. However, especially for the aspects of speaking and interaction – one of the main aspects of learning a language – the e-learning remains challenging and has an impact on the motivation and therefore learning of students, especially younger and less mature students.*

**Keywords:** *technology - e-learning – language learning – German foreign language – Covid-19*

## **INTRODUCTION**

Covid-19 and with it the rapid shift from face-to-face to online learning has affected learning and teaching at most learning institutions all around the world. Although e-learning and the use of technology to support and enhance learning is not a new concept (Faizi, Afia, & Chiheb, 2014) and its advantages outnumber the disadvantages (Arkorful & Abaidoo, 2015), the pandemic showed the level of preparedness of institutions, lecturers and students as well as publishers and available e-learning material.

As language learning generally focuses on reading and writing, but also listening and speaking skills as well as pronunciation and interaction, the later ones are severely challenged when shifting the learning to online mode and mostly asynchronous learning (Arno, 2016). Further, although a number of learning material can be found online, most of the textbooks still use a more traditional approach and little online material.

## **TECHNOLOGY IN LEARNING AND TEACHING**

Technology entails according to Bates (2015, p. 235) firstly “a system that combines computers, telecommunications, software and rules and procedures or protocols” and secondly “things or tools used to support teaching and learning”. Against this, technology has been used widely in teaching and learning in form of PowerPoint presentations, videos, media and internet; also possibilities presented by ICT and social media offer innovative tools for teaching and enhancing students’ learning (Glowatz & O’Brien, 2017). However, technology also means taking learning online and the use of learning platforms and creation of virtual classrooms as it has been promoted from the 21<sup>st</sup> century on (Faizi, Afia, & Chiheb, 2014). Through e-learning, remote learning or online learning, material is presented and distributed with or without personal interaction (Kerres & Preußler, 2012) and learning can take place anywhere. Further, it is more personalised and has a major impact on the way students learn, with what students learn and on student-orientated learning (Arkorful & Abaidoo, 2015; Hussin, 2018; Glowatz & O’Brien, 2017). However, “older, more mature students; students with already high levels of education; part-time students who are working and/or with families” (Bates, 2015, p. 371) are better distant students and have “strong motivation to take such courses because of the impact they have on their quality of life” (Bates, 2015, p. 371). Hence, successful online teaching is not just transferring the face-to-face data to an online platform, but adequate material has to be developed (Bates, 2015; Shift, n.d.). If using technology in teaching and learning, it requires different skills and knowledge, as Glowatz and O’Brien (2017) discuss with the relation of technological knowledge, pedagogical knowledge as well as

content knowledge and requires the combination or linking of them which makes the teaching (and learning) more demanding or challenging but also exciting. Although the differentiation of synchronous and asynchronous learning was usually used to contrast face-to-face and online learning (King, 2016, p. 2016), in the meantime, videoconferencing software like Zoom or BigBlueButton also allow synchronous learning environments through technology quite successfully and Zoom meetings have become the most popular programme during the pandemic, not only in education.

Lastly, the use of technology and e-learning fosters digital literacy or digital competence, a very recent concept that describes technology-related skills such as ICT skills, technology skills, information technology skills, (Ilomäki, Kantosalo, & Lakkala, 2011) as this is an important concept and almost a prerequisite when including technology in learning. In other words, one needs to be able to use communication technology such as email and internet skills as well as a competence in basic computer programmes and learning platforms. Against this background, digital literacy or competency is important not only in our society and our work world but needs to be incorporated into teaching and learning in higher education (HE). Research also shows that using ICT leads to more cooperation among learners within and beyond school and a more interactive relationship between students and teachers (Rieber & Welliver, as cited in Saba, Igwe, Mogaji, & Mustapha, 2013). Therefore, it is pertinent to develop a digital literacy in using technology in teaching and learning.

In summary one can say, technology is already part of teaching and learning, digital literacy is a pertinent skill in the 21<sup>st</sup> century

and with e-learning one can learn almost anywhere, as e-learning offers “great opportunities for remote and self-paced learning” (Hussin, 2018, p. 92). Technology and e-learning are not only important aspects as we also face and discuss the 4IR, but it has been the way forward during the worldwide Covid-19 pandemic when e-learning offered a solution to continue with learning despite lockdowns and increasing numbers of infections.

## **DIGITAL LANGUAGE LEARNING**

Digital language learning is becoming more and more popular, and classes, mostly individual tutoring are facilitated online, but especially language apps – most famous the free *Duolingo* language app, among others, are popular for an autonomous learning of a foreign language (Loewen et al., 2019). However, if languages are learned through a language app, the app trains mainly vocabulary and grammar, but also reading and translation and often includes the gaming aspect, which is an integral part in most language teaching (Gunter, Campbell, Braga, Racilan, & Souza, 2016). However, the aspects of listening and speaking/pronunciation are mainly reduced to short sentences and repetition, but not for interaction. Although Loewen et al. (2019, p. 293) claim that “research investigating the effectiveness of such study for L2 learning [...] has been limited, especially regarding large-scale commercial L2 learning apps, such as Duolingo”. Gunter et al. (2016) have already pointed out the lack of interaction:

Furthermore, future language learning game designers could consider designing activities that are immersive and authentic, offer role playing or fantasy, and provide a context for discovery and decision-making. The activities included would have a communicative feature and

alternative paths that allow learners of varying levels to travel along paths geared towards the transfer of knowledge. Adding these types of elements and characteristics to learning applications would move learning applications with game elements to educational games that could potentially engage learners in an immersive manner. (p. 232)

Further, Krashen (2014) points out in his discussion of *Duolingo* that, although a number of participants in a Duolingo sponsored study stated that they were satisfied with the app, almost 50% of the participants dropped out of the study and presumably the learning. Although no reason or explanation is given, one can presume it is lack of time or motivation or the missing interaction.

Within the context of teaching and learning of the German language in Southern Africa or Africa, most university language courses teach German in face-to-face mode. Only de Kock (2016) illustrates the use of the learning platform at the University of the Western Cape (UWC) as a flipped classroom to introduce the grammar explanation online and uses the face-to-face session for practical application in language classes in German. Also, Faizi et al. (2014) find that social media has many advantages for foreign language learning. However, practicing presentation skills will remain in face-to-face sessions as well as classes on content to practice the language and communication skills. So far, in the German classes at UNAM we have only used Moodle in German Studies classes, but not in the language modules of German as Applied and Business Language. However, due to the Covid-19 pandemic, we needed to shift to online learning and teaching despite the challenges

and shortcomings in language teaching and create material and methods to support students' learning.

## **ONLINE GERMAN DURING THE COVID-19 PANDEMIC**

In March 2020 Namibia had first cases of Covid-19 and on March 17<sup>th</sup>, 2020 the State of Emergency was declared and a countrywide lockdown followed. UNAM decided to offer the second half of the first semester through e-learning. Although the second semester was anticipated to return to face-to-face learning, shortly before the start of the semester the university decided to continue with remote learning and later announced that even examination will be online and question papers to be “translated” into online formats on Moodle. Beukes-Amis, director of CODel (Centre for Open, Distance and eLearning) at UNAM stated that everything was in place for remote learning and ready and flexible for e-learning, finding out the circumstances and about also supplying students with 3G and 4G devices (Namibia Broadcasting Cooperation, 2020). However, not only the infrastructure – learning platform and necessary technology – is needed but also lecturers have to be trained and need to familiarise themselves with technology, the learning platform and its possibilities. Students need to have a digital competence, equipment and internet connectivity. Besides the universities learning platform Moodle and the Panopto software to record classes, mainly WhatsApp was used to communicate with the students for a faster, more direct and also more convenient interaction in the German language module during the remote learning and teaching.

## **LEARNING MATERIAL AND METHODOLOGY**

As mentioned before, learning material for online classes cannot be transferred equally from face-to-face classes, but as there was little time and ability to change the course into a fully digital learning environment, the material available was transformed and adapted. *Foundations of German* and *German for Beginners* are first year modules that introduce student to the German language from the beginning. The German textbook *Studio d A1* (Funk, Kuhn, Demme, Bayerlein, Diener, & Lex, 2003) is used and as most students had a copy of the textbook and there was even a free version online, also the e-learning was based on the textbook. However, in regard to online learning material, the publisher had only a few extra worksheets available on their website. The new and revised edition of *Studio [21]* had at least for each chapter some interactive exercises that could be used (Cornelsen, 2020a). Nevertheless, these exercises did not work from smartphones as one needs to download FlashPlayer, an app not available on the smartphone and soon be terminated for computers as well. Therefore, material needed to be developed and for every week, short Panopto-sessions, usually three to four – relating to the allocated face-to-face classes – but only between 10 to 20 minutes long were prepared. The Panopto sessions were based on PowerPoint presentations with the respective pages, activities and exercises from the textbook (mostly grammar, vocabulary, reading but also listening comprehensions, pronunciation and reading aloud) and instructions and explanations were given through voiceovers (Figure 1).



**7 Berufe**

**1 Was machen Sie beruflich?**

**Hier lernen Sie**

- über Berufe sprechen
- Tagelöhne und Tätigkeiten beschreiben
- persönlich vorstellen (im Beruf)
- Modalverb sein, können (Brockhammer)
- Präsenzialität und kein im Akkusativ
- eine Statistik verstehen
- Konsonanten, s, g und ß

**1 Berufe. Ordnen Sie die Fotos zu.**

- der Bankangestellte
- der Automechaniker
- der Programmierer
- die Sekretärin
- die Kellnerin
- die Taxifahrerin
- die Krankenschwester
- der Bäcker

Figure 1: PowerPoint presentations with material from the textbook for an online lecture/class.

The sessions included activities or exercises with solutions and explanations on the next slide or at the end of the presentation, vocabulary, as texts with new words were read aloud and discussed (Figure 2).

**2 Im Beruf**

**a) Lesen Sie den Text.**

Herr Effenberg möchte einen Termin bei Frau Strunz in Dresden. Er ruft an und macht den Termin. Dann fährt er nach Dresden. Aber es gibt einen Stau und er ist zu spät. Er telefoniert mit Frau Strunz.

**b) Hören Sie den Dialog und üben Sie zu zweit.**

- Strunz.
- Hier ist Effenberg, Frau Strunz?
- Ja, hier ist Franziska Strunz. Herr Effenberg, wo sind Sie?
- Auf der Autobahn bei Leipzig. Es tut mir leid, ich komme zu spät. Aber wir hatten einen Stau. Ich bin so in einer Stunde in Dresden, so gegen zehn.
- Gut, Herr Effenberg, danke für den Anruf und gute Fahrt!

**c) Üben Sie den Dialog: andere Namen, andere Termine.**

**3 Hören Sie zu: p oder b? Sprechen Sie nach. Finden Sie andere Wörter.**

Papier – Büro, Beruf – Praxis, ab Bochum – ab Paris, ...

**Vokabeln**

- einen Termin machen – to book an appointment
- spät – late
- telefonieren – to phone
- die Autobahn – highway
- so in einer Stunde – in roughly an hour
- der Anruf – call

Figure 2: PowerPoint with reading a text with new vocabulary.

It would have been possible, just to use PowerPoint slides with recordings, but students using phones were not able to listen to the audios. In addition, short YouTube videos on respective grammar or vocabulary, which are available online, were shared on Moodle; extra activities such as online activities found on the web and supporting targeted language aspects were uploaded and online exercises created in Moodle format. Every weeks' learning was tested in a short homework "Hausaufgabe", usually focusing on grammatical aspects, vocabulary, writing or reading comprehension, some as online (Figure 3) and some as offline activities.

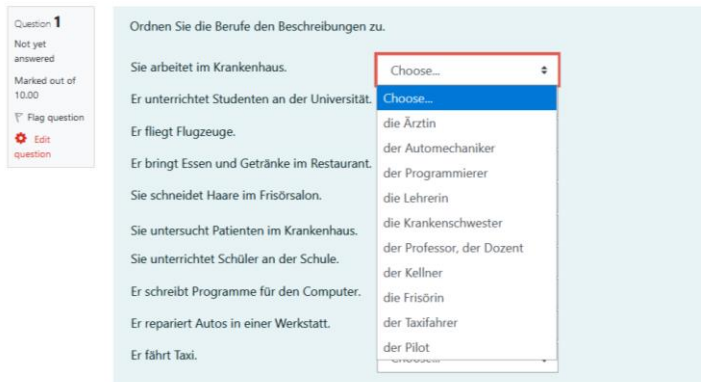
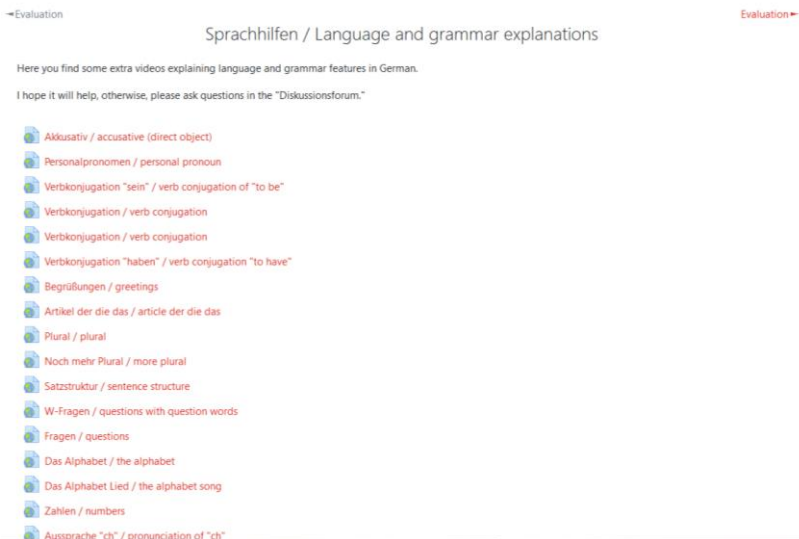


Figure 3: Online homework on vocabulary

All homework was marked and feedback was given individually and collectively, if there was a problem most students had, with extra videos or explanations and added to the section of "Sprachhilfen / Language and grammar explanations" (Figure 4).



.Figure 4: Additional language explanations links on Moodle

Additionally, short clips of the podcast “Easy German” or “Super Easy German” were uploaded which explain typical German aspects of life, culture or the language using “easy German” and English subtitles (Figure 5).

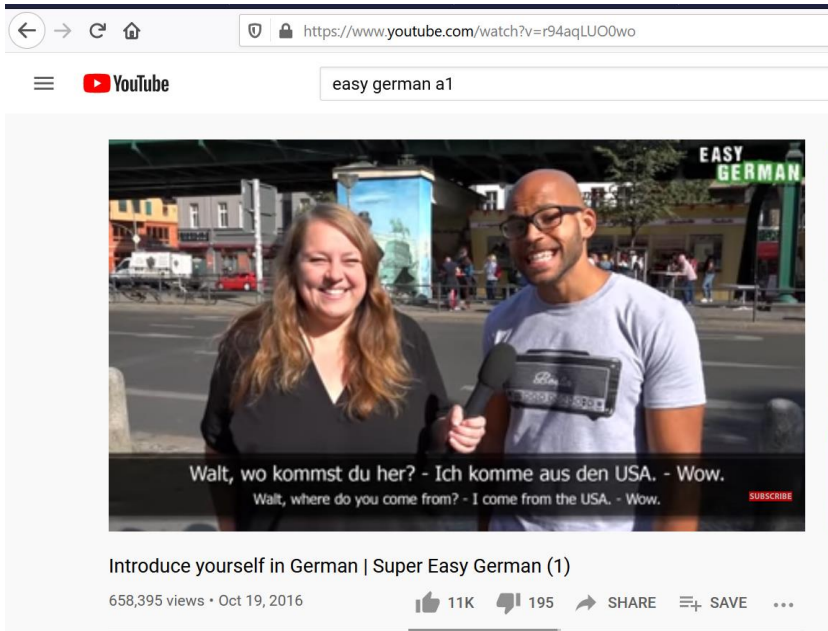


Figure 5: Podcast “Super Easy German” on YouTube

Further, the soap “Nicos Weg”, a series especially developed for language learners of German, was advertised and some students commented positively about it. However, these activities were rather on a voluntary basis and not necessarily included in the lessons or homework or exercises.

## COMMUNICATION AND INTERACTION

As mentioned above, every week presentations on Panopto were recorded and uploaded to guide the students through the respective activities and exercises in the textbook and to allow students to do the lessons as they could access it at their own time and work through it independently. However, students were able to contact the lecturer any time with questions or with further explanations. Every week, the tasks were communicated

via the Moodle platform but also through the WhatsApp group (Figure 6).

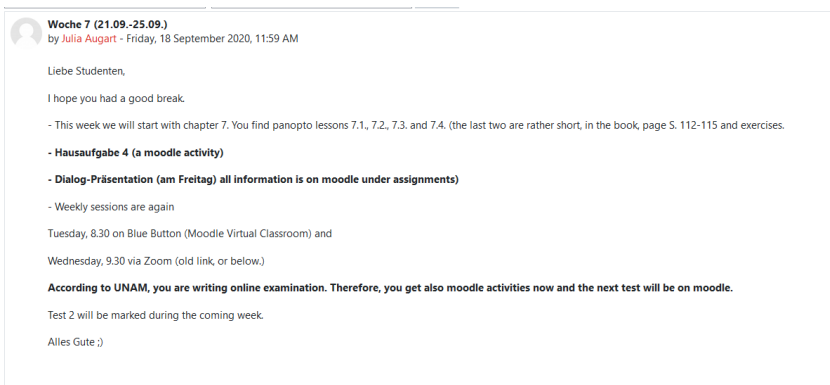


Figure 6: Weekly announcements on Moodle and WhatsApp about the teaching and learning.

For the second semester, as the students needed to have more speaking and interaction possibilities, different activities were added. Presentations had to be recorded and handed in for speaking and pronunciation mainly, an activity that is also included in face-to-face teaching as the recording is usually repeated several times which helps with the learning and saves class time. Two meetings (Zoom and BigBlueButton) were offered every week to practice pronunciation, interaction but also to introduce and discuss some of the grammar aspects and exercises were done together. However, as the meetings were on a voluntary basis due to students' availability and internet situation, on average only four to five students attended those meetings. Nevertheless, I also added some more interaction activities into the Panopto sessions as e.g. students had to send a text or voice message instead of just doing the exercise by themselves (Figure 7, green box).

**4** **Wo Leute arbeiten / wie Leute zur Arbeit kommen.** Erzählen Sie.

*Ana geht zu Fuß!*

**Redemittel**

Er	wohnt in ...		
Sie	arbeitet bei/in ...		
Mein Freund	kommt/fährt mit	dem Bus der U-Bahn	zur Arbeit. zum Sprachkurs.

**5** Fragen Sie im Kurs.

*Wo wohnen Sie und wo arbeiten Sie?*

*Ich wohne ... und arbeite ... Und Sie?*

*Wie kommen Sie zum Deutschkurs?*

*Ich komme mit der Straßenbahn. Und Sie?*

Schreiben Sie 3 Fragen und 3 Antworten.

Wie kommen Sie zum Deutschkurs? Schicken Sie eine „voice message“ mit der Antwort an Frau Augart.

Figure 7: Interactive task in a Panopto-class.

Further, students had to do a presentation of a dialogue which is a common activity and assignment in face-to-face classes. During the online learning, students were organised in pairs, given a timeslot, but could choose the communication mode (WhatsApp or Zoom). This exercise did not only give the students an opportunity to practice language and dialogue situation with a classmate, but it offered the opportunity to interact with everyone. The quality of the dialogues was comparable to the presentations in face-to-face classes, however, I realised that a number of students were not really able to interact with me in German. They could only reply with “Wie bitte?” (“Excuse me?”) or in simple phrases we had practiced in face-to-face classes at the beginning of the first semester before the change to remote learning. However, most of the students were quite happy about the assignment as it gave them the possibility to work with a classmate, to interact with someone as they had been studying mostly by themselves – as I was told. Moreover, some requested to have more of such activities. But when they were given another dialogue and

they could decide if they want to present or rather send a written version, none opted for the presentation.

Lastly, the students had a quiz question every Monday at 12 o'clock, where they were divided into two groups and the teams competed against each other. The questions were based on the topic of the week before, the quiz question could be a question only, a picture with a question, or even a voice message with questions. Sometimes a question-and-answer-session developed out of the quiz question to discuss the mistake or other possible answers (Figure 8).

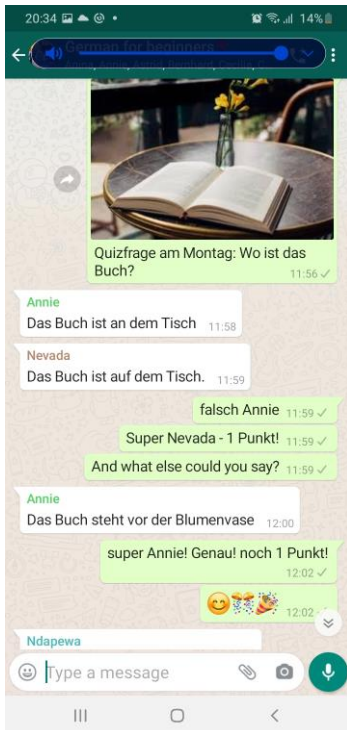


Figure 8: Weekly competition in the WhatsApp group with questions on German and Germany.

## SHORTCOMINGS AND CHALLENGES

The discussion of teaching material, methods and activities as well as attempts to communicate and foster interaction with and among the students has already indicated some of the shortcomings and challenges that were faced during the online learning and teaching. Firstly, although there is quite a lot of material, especially for a beginners' level of German, it is sometimes difficult to find exercises or YouTube videos that fit well into the progression or the combination of vocabulary and grammar prescribed by the textbook used. If all material has to be developed and recorded by the lecturer or compiled to a progressive learning, much time is needed for the material. Therefore, it is advisable to use a textbook with a planned progression, but one should start looking for a textbook that has more e-learning components, or, if the language class is going to be completely online, to use an online course as they are developed now, e.g. *Momente* with interactive and intermedial material. *Futur d-Labor* started to develop digital material for the existing textbooks as setting online assignments with the learning platform software and possibilities is quite time consuming.

Interaction, communication and pronunciation, important aspects of language learning, are definitely disadvantaged as I suspect most students did not actively participate in the Panopto lessons (here a number of pronunciation exercises were done, but some students had major problems). As the sessions on Zoom and BigBlueButton were voluntary, not all students participated. However, in the classes, the learning was much slower than in a face-to-face class as there was often a delay in the answers, internet was slow or even interrupting and



the communication and interaction was not as successful as in face-to-face classes.

Obviously, internet connection and internet access were and are a major problem for many of the students at UNAM despite the above quoted statement by Beukes-Amiss, but also often the equipment students use is old and or not apt for e-learning. Many students were just using their phones – where they can often not make use of all provided material, as for example PowerPoints did not have recordings, FlashPlayer, which was necessary for some interactive material, cannot be installed and typing longer texts causes problems. Further, I assume many of the students also have older equipment which does not connect that well to the internet and/or the learning platform or were in remote areas with no or bad internet connection. All of this already indicates that the e-learning disadvantages many students of low-income backgrounds or from rural areas. This eventually leads to a wider gap of the student population as we already have (Adzovie, Jibril, Adzovie, & Nyieku, 2020). Further, some students just did not like the e-learning as they were struggling not only with the internet, but also finding the information and organising their learning. As the older students in third and fourth year did not have any problems to adjust and to work independently, the first and even second year students saw it as a challenge. Students formulated this in the WhatsApp groups as the e-learning was extended and announced for the second semester. The few feedbacks I received via evaluation forms on Moodle also support this observation. Students did not study as much as they would usually, as one of the very good and also motivated students commented on the Moodle discussion forum: “The elearning is alright. Prof Augart really explains well however in all honesty i struggle to spend alot more time on elearning but im trying to work on that” (Moodle,

September, 11, 2020). A look on the time spend on Moodle also gives an indication about the learning and the motivation to learn. For the second semester, most students spend an average of ten hours for the entire semester on Moodle, which is less than an hour per week. Considering that two of the four tests and three of seven “Hausaufgaben” were online assessments, the time of actual online learning was even less. However, students could also download the material and work often offline. In my observation, especially, younger students had difficulties to structure their learning and to motivate themselves to follow the lectures, to participate in the meetings and the extra activities which proves the findings in research that e-learning is more suitable for mature students. However, small weekly assignments “Hausaufgaben” and tests, activities that resulted directly into a mark were done by most of the students and I would say comparable to assignments in face-to-face classes. As of motivation, this seems to be another challenge as I felt I was not able to motivate the students with the prepared material, the competition, the songs, the tongue twisters among other activities. I deliberately asked in the course evaluation “What motivated you? What did you miss or what would have motivated you?” One student wrote “Nothing motivated me. I really loved the German interaction in person.” (Moodle, November 2020). With such an answer, I think it is difficult to motivate and excite students if not in a face-to-face classroom setting. A blended-learning setup would help to use the face-to-face “for what it does best, such as introducing new topics, explaining important language points or for meaningful communicative activities” (King, 2016, p. 2) and online platforms for presentations of theoretical concepts, grammar explanations and exercises.

Lastly, some students used translation apps to do their homework instead of applying what they had been learning. This became obvious, when students did not use vocabulary and phrases that were introduced in the lessons, far to advanced sentence structures and one student even submitting the assignment in Dutch instead of German. This form of plagiarism had become quite serious that I had to intervene and announce new regulations, also for online examinations. But one can only appeal to students and deduct marks or even not accept it to convince students that this is not the way forward to successful learning.

## **CONCLUSION**

In summary, one can say that e-learning has many opportunities and possibilities and allows learning to take place even when meetings or face-to-face classes are not possible. It is also a method that will surely develop and improve in the future due to the Covid-19 pandemic. Even language classes can be facilitated online, however, the aspect of interaction is problematic even with online meetings and online group work. Even more challenging is the aspect of independent learning and motivation for learning. For the language learning and interaction, I would therefore promote face-to-face classes as the language is a communication tool and a communicative subject that motivates in the interaction not just in the learning of grammar, vocabulary and exercises. Further, if there is a need to continue with online learning, students need to participate and interaction should not be done on a voluntary basis, as the experience showed that students often opt for the more convenient way, if they are given the choice and the intrinsic motivation often is not strong enough for voluntary participation as the participation and the dialogue exercise

show. If the motivation is created in the classroom by interaction, where students also often only come, because they have to, then online participation needs to be mandatory and hopefully the motivation can be similarly triggered as in a face-to-face teaching. For the future, I envisage a blended learning approach to enhance students' digital competence and self-study as for theoretical or grammatical concepts and to have more class time for interaction and communication or games and other fun activities. Further, I am looking forward to more interactive and adaptable and flexible material provided by publishers of textbooks as the *Futur d-Labor* indicates and as we have all learned through the pandemic that we are not as prepared for e-learning as we had thought.

## REFERENCES

- Adzovie, D. E., Jibril, A. B., Adzovie, R. H., & Nyieku, I. E. (2020). E-Learning resulting from Covid-19 pandemic: A conceptual study from a developing country perspective. In *7th European Conference on Social Media ECSM 2020* (pp. 19-27).
- Arkorful, V., & Abaidoo, N. (2015). The role of e-learning, advantages and disadvantages of its adoption in higher education. *International Journal of Instructional Technology and Distance Learning*, 12(2), 397-410. Retrieved from
- Arno, C. (2016). *Sprachenlernen durch E-Learning*. Retrieved from <https://www.lecturio.de/magazin/gastbeitrag-sprachen-lernen-durch-e-learning/#e-learning-vs-konventionelles-lernen>
- Bates, A. W. (2015). *Teaching in a digital age: Guidelines for designing teaching and learning*. Vancouver, BC: Tony Bates Associates Ltd.
- Cornelsen. (2020a). *Zusatzmaterialien*. Retrieved from <https://www.cornelsen.de/reihen/studio-21-120002290000/grundstufe-120002290001>
- Cornelsen. (2020b). *Futur d-Labor*. Retrieved from <https://www.futur-d.com/>
- De Kock, S. (2015). Transforming GER101 for the 21st Century Learner. Reflections on Introducing Technology as a Teaching and Learning Tool to First Year German Students at the University of the Western Cape, South Africa. *eDUSA. Deutschunterricht im Südlichen Afrika / Teaching German in Southern Africa*, 10(1), 54-68.

- Easy German*. (2016). Retrieved from Super easy German  
<https://www.youtube.com/watch?v=r94aqLUO0wo>
- Faizi, R., El Afia, A., & Chiheb, R. (2014). Social media: An optimal virtual environment for learning foreign languages. *iJET. International Journal of Emerging Technology in Learning*, 9(5), 64-66.
- Funk, H., Kuhn, C., Demme, S., Bayerlein, O., Diener, B., & Lex, B. (2003). *Studio d A1: Deutsch als Fremdsprache*. Cornelsen.
- Glowatz, M., & O'Brien, O. (2017). Academic engagement and technology: Revisiting the technological, pedagogical and content knowledge framework (TPACK) in higher education (HE): The academics' perspectives. *IAFOR Journal of Education*, 5(Special Issue), 133-159.
- Gunter, G. A., Campbell, L. O., Braga, J., Racilan, M., & Souza, V. V. S. (2016). Language learning apps or games: An investigation utilizing the RETAIN model. *Revista Brasileira de Linguística Aplicada*, 16(2), 209-235.
- Hussin, A.-A. (2018). Education 4.0 made simple: Ideas for Teaching. *International Journal of Education and Literacy Studies*, 6(3), 92-98.
- Illomäki, L., Kantosalo, A., & Lakkala, M. (2011). What is digital competence? *Linked portal*. Brussels: European Schoolnet. Retrieved from <http://linked.eun.org/web/guest/in-depth3>
- King, A. (2016). Blended language learning: Part of the Cambridge Papers in ELT series. [pdf] Cambridge: Cambridge University Press. Retrieved from [https://languageresearch.cambridge.org/images/Language\\_Research/CambridgePapers/CambridgePapersinELT\\_BlendedLearning\\_2016\\_ONLINE.pdf](https://languageresearch.cambridge.org/images/Language_Research/CambridgePapers/CambridgePapersinELT_BlendedLearning_2016_ONLINE.pdf)

- Kerres D., Preußler, A. (2012). Mediendidaktik. In D. Meister, F. von Gross, & U. Sander, U. (Eds.), (*Enzyklopädie Erziehungswissenschaft Online. Fachgebiet/Unterüberschrift: Medienpädagogik, Hauptgebiete der Medienpädagogik.* Weinheim / Basel: Beltz Juventa. DOI 10.3262/EEO18120258
- Krashen, S. (2014). Does Duolingo “trump” university-level language learning. *International Journal of Foreign Language Teaching*, 9(1), 13-15.
- Loewen, S., Crowther, D., Isbell, D. R., Kim, K. M., Maloney, J., Miller, Z. F., & Rawal, H. (2019). Mobile-assisted language learning: A Duolingo case study. *ReCALL: The Journal of EUROCALL*, 31(3), 293-311.
- Namibia Broadcasting Cooperation. (2020). *Beukes-Amiss says UNAM is looking for ways to mitigate Covid-19 challenges – NBC.* Retrieved from <https://www.youtube.com/watch?v=e03u1vxRiTg>
- Saba, T. M, Igwe, C. O., Mogaji, J. O., & Mustapha, M. J. (2015). Impact of e-learning on employability development of vocational technical education: Pre-service Teachers for national security. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)*, 5(1), 59-64. Retrieved from <http://jeteraps.scholarlinkresearch.com/articles/Impact%20of%20e-learning%20on%20Employability.pdf>
- Shift. (n.d). *Disruptive elearning.* Retrieved from <https://www.shiftelearning.com/blog/bid/346397/the-diy-guide-to-converting-existing-content-into-an-elearning-course>