

# Promoting less commonly taught languages in the digital age

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## Abstract

This article looks at the potential of interactive multimedia learning materials to promote less commonly taught languages and thus preserve multilingualism. The focus is on a research project at the university college of teacher education in Burgenland, Austria. From a linguistic point of view, the eastern Austrian province of Burgenland is of great interest, as two recognized minority languages, i.e. Burgenland Croatian and Hungarian, are taught besides German in some schools. The aim of the research project was the creation, implementation and evaluation of a digital textbook supplement for the recently published, lower-secondary Burgenland Croatian textbook “Na putu”. The design principles of and the underlying motivation for the digital textbook supplement, which was piloted in seven schools in the academic year 2017/18, will be outlined. The students’ evaluation of the digital textbook supplement shows considerably high overall user satisfaction with the tool as well as high appreciation of both the instant feedback function and the opportunity to work independently.

### Keywords:

Minority languages  
 Digital learning materials  
 Multilingualism

### Schlüsselwörter:

Minderheitensprachen  
 Digitale Lernmaterialien  
 Mehrsprachigkeit

## 1 Introduction

As in other European countries, in Austria the national educational policies frame the implementation of learning technologies in schools across a range of subjects. In this respect, significant investments have been made in Austrian technology in schools in recent years, attempting to develop learners’ digital literacies. Furthermore, about a year ago, the Austrian ministry of education announced their strategy “school 4.0” (BMB, 2017), which defines the design, the implementation and evaluation of digital learning and teaching formats in all subjects as one of its main pillars. This initiative highlights the importance of providing educators with free and easily accessible digital learning and teaching materials. Furthermore, it attempts to offer prototypical teaching scenarios that efficiently integrate digital media in the classroom. On a similar note, the trend in secondary education in Austrian schools is towards digital textbooks or digital textbook supplements. As concerns language teaching, a large number of approved textbooks for secondary education have been made available in electronic form. Almost identical to the printed schoolbooks, they offer students and teachers the opportunity to view the contents via electronic devices such as personal computers, laptops or tablet computers. Furthermore, most textbooks are now supplemented with additional online, interactive materials, which mainly serve the purpose of revision or individual practice.

However, such a rich offer of digital practice materials is not available for the less commonly taught languages such as the minority language Burgenland Croatian. Burgenland Croats have been a recognized minority since 1955. Burgenland Croatian has been an official language in the eastern Austrian province of Burgenland since 1987. Obviously, this language occupies a special position in the school system due to its minority status. In the academic year 2017/18, 374 children in lower secondary education, aged ten to fourteen, studied Burgenland Croatian in schools. (Landesschulrat für Burgenland, 2017) Due to this small number, this language is not very attractive for textbook publishers for financial reasons and is not included in the ministry of education’s digital textbook initiative either. Moreover, compared to mainstream languages such as English, there are generally

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hardly any digital teaching and learning materials that teachers have easy and free access to. Consequently, it is difficult to implement modern forms of language teaching that may supposedly increase the popularity of the minority language, which is actually fighting with dwindling numbers of users. (Kinda-Berlakovich, 2005)

## 2 Developing new materials for Burgenland Croatian

Under these circumstances, a group of Burgenland Croatian teachers at the university college of teacher education in Burgenland (PH Burgenland) have been developing new and innovative teaching and learning materials for use in bilingual schools, where Burgenland Croatian is taught besides German and/or used as a second language of instruction. In doing so, teachers at the university college have attempted to combine the institution's two main areas of expertise, namely multilingualism and diversity as well as digital teaching and learning. In a first step, a new paper-print textbook, called "Na putu" (Heisinger, Horvath, Jesch & Mikacs, 2017), has been designed for the first form of lower secondary education. It distinguishes itself from other, admittedly rather outdated, textbooks for Burgenland Croatian by its child-friendly layout, the wide range of content and methodological diversity. This textbook is competence-oriented and applies an integrated-skills approach with exercises for listening, speaking, writing and reading in each chapter. At the end of each chapter, learners can assess their progress with regard to selected competences. In terms of content, the textbook does not only attempt to foster language learning, but also covers cultural aspects concerning the Burgenland Croatian ethnic group. For instance, the textbook uses Burgenland Croatian folk songs that are also available on a CD with a playback version. Finally, a variation of different levels of difficulty in the tasks allows a wide use.

In fact, this variation of difficulty levels is of particular relevance, since especially in the minority language Burgenland Croatian the group of learners tends to be very heterogeneous. That is to say, in particular at the transition from primary to lower secondary education, pupils show diverse levels of language competence. Concerning their levels of proficiency, some students may actually consider Burgenland Croatian as a new foreign language at the beginning of secondary education. This assumption is confirmed by the findings of a survey in the context of the present research project: out of the 99 participants, i.e. the pupils that were taught Burgenland Croatian with the digital textbook supplement in the academic year 2017/18, only 18 claimed to have been brought up bilingually (German and Burgenland Croatian). Additionally, when asked about the language most frequently spoken at home, only nine people chose Burgenland Croatian. Furthermore, depending on the area of the school, Burgenland Croatian is taught under different conditions. Some secondary schools are run as bilingual schools with Burgenland Croatian as one language of instruction next to German; in other schools the minority language is taught as a compulsory subject; whereas in some schools Burgenland Croatian is merely offered as an optional subject. (Buchholz, 2012; Kinda-Berlakovich, 2005)

To ensure that modern teaching materials are used in all subjects - also in Burgenland Croatian lessons - and to promote this language with the supposedly added value of digital media, a digital textbook supplement has been developed. This means that interactive multimedia content in an online course run on the Austrian-wide learning management system "LMS.at – Lernen mit System" complements the materials in the book. For the sake of individualization and differentiation, which, as already mentioned, are of particular relevance in teaching this language, a number of materials have been created to cater to different levels of competence. These exercises can be used by teachers in class or as additional offer for practicing the language outside the school. They allow students to work largely independently at their own pace. In addition, the digital textbook supplement underlines the competence-oriented character of the textbook and tracks the students' progress with regard to exercises solved and competence acquired.

Assessing technology in language teaching as to its fitness for purpose, Thornbury (2016) underlines the importance of "access to rich, comprehensible and engaging reading and/or listening input" (Thornbury, 2016, p. 31). Not only do we know that comprehensible input is necessary for language acquisition to occur, research has also looked into the ideal amount of input in order for language acquisition to be successful. For example, in vocabulary acquisition several encounters with one word or phrase have been found to be required in order to remember it. (Nation, 2001) This is also true for constructions: usage-based theories of second language acquisition (Ellis, 2003) say that you need to be exposed to constructions many times in order to acquire them. Accordingly, the additional online materials comprise a vocabulary trainer, listening and reading exercises as well as language exercises that focus on language structures presented in the related textbook chapters. Their aim is to increase the language input in order to guarantee repeated encounters with the language. This is particularly true for the listening exercises, which are generally hard to find for Burgenland Croatian. Actually, these exercises serve a double purpose: first, they offer spoken language input that is hard to find elsewhere; second, the

recording of the dialogues, which deal with everyday situations in the learners' world, also contributes to the preservation of the minority language.

Another important aspect to consider when designing the course was "flow". This online learning design principle is based on the second-language-acquisition finding that the more time is spent on a learning task, the better. (Thornbury, 2016). According to Egbert (2003) flow is achieved when the learners' skills are equal to task, the task requires attention and is intrinsically interesting, learners perceive they have control over the task and its outcomes. In other words, "flow" is about the learners' willingness to spend time on the virtual learning space and to engage in the exercises offered. Keeping the learners engaged, motivated as well as challenged is one of the main goals of the provision of an innovative learning environment for Burgenland Croatian.

### 3 Providing an innovative learning and teaching environment

Undoubtedly, any kind of language learning requires a lot of practice and repetition. However, the nature of practice is another aspect to be considered. With regard to online language learning tools, Thornbury (2016) asks: "Does the tool provide opportunities for massed practice, and in conditions that replicate conditions of use?" (Thornbury, 2016, p. 32) In the project under discussion, each pupil has their own virtual "Na putu" learning space on the learning management system LMS.at – Lernen mit System (see fig.1). Within this personalized study environment, the exercises are structured according to textbook chapters and areas of competence. An application called "Besser Lernen" (better studying) integrated into the course enables the individual student to keep track of their own learning progress, which is represented by a traffic light system (exercises in red circles have been answered wrongly, exercises in yellow circles have been answered correctly once, exercises in green circles have been answered correctly twice). Consequently, learners know immediately which tasks need to be practiced further, what they have already achieved or where there is still room for improvement. The results of these competence checks can also be accessed by the respective teachers and so form the basis for the selection of appropriate remedial measures in the classroom. What is more, the provision of online self-assessment tools makes the learners' competence in the language visible. This seems of particular relevance in the context of studying a minority language. To be more precise, the competence-grids are supposed to raise the students' awareness of the asset of knowing Burgenland Croatian, which unfairly competes with English and is not always necessarily regarded as a worth-while personal accomplishment, especially among the younger generation.

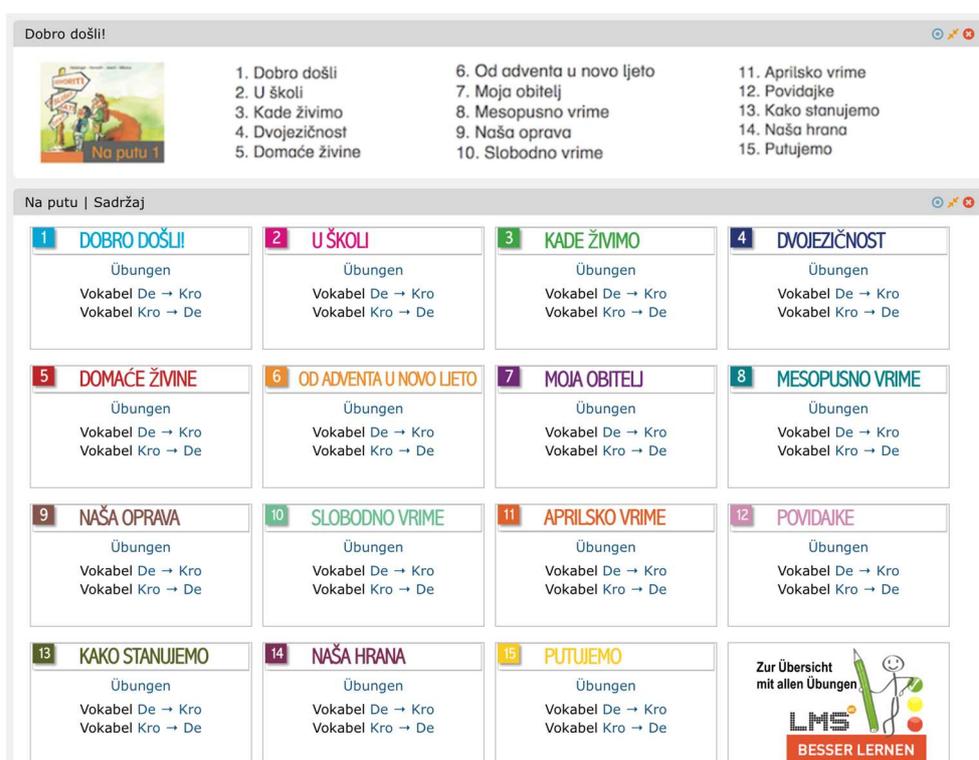


Fig.1: digital textbook supplement "Na putu" on LMS.at – Lernen mit System

Above all, providing a learner-centred practice environment is in line with two basic principles of effective learning identified by John Hattie (Hattie, 2012): conscious practice and concentration or persistence. According to Hattie, the ability to consciously, persistently practice is one of the most important components of successful learning: *“Sometimes, learning is not fun. Instead, it is just hard work; it is just deliberate practice; it is simply doing some things many times over.”* (Hattie, 2012, p. 120) Conscious practice is not understood as repetitive and - for the student - meaningless practice, but rather as a conscious activity aimed at achieving transparent, predefined goals. Accordingly, when creating the interactive “Na putu” exercises, an attempt was made to show the students which exercises pursue which goals in the learning process. The exercises are thus not only assigned to chapters but also to descriptors in the form of can-do statements. This is a basic prerequisite for students to take responsibility for their own learning process. However, not only does conscious practice require complete concentration, but also that someone - either the student or the teacher - monitors the learning process or gives feedback. The learner-appropriate concept of the “Na putu” textbook supplement allows students to take on this role themselves. In addition, as already mentioned, the exercises are structured in such a way that the students receive instant feedback by the computer. Computers, as Hattie (2012) argues in this context, react to all students in the same way, no matter who they are - male or female, fast or slow. In this way, no one can be overlooked or left out. Moreover, computer feedback is also considered potentially less threatening to students than teacher feedback.

## 4 Evaluating the digital textbook supplement

In the academic year 2017/18 the digital textbook supplement under discussion was piloted by 99 students, 54 girls and 45 boys, in seven different schools in Burgenland from September 2017 to June 2018. The pupils completed a short questionnaire at the end of the academic year. The majority of the students attended the first form of secondary lower education ( $N = 69$ ); 15 participants were in the second form; 10 students attended the 3<sup>rd</sup> form; and 5 students were in the 4<sup>th</sup> form. Concerning their first language, most students ( $N = 83$ ) named German, with 18 pupils considering themselves bilingual (German and Burgenland Croatian). 21 participants identified Croatian ( $N = 13$ ), Serbian ( $N = 2$ ) or Bosnian ( $N = 6$ ) as their first language. Among the languages most frequently spoken at home German (73%) was in the first place, followed by Burgenland Croatian (9%).

Generally speaking, the students seemed to be familiar with the use of digital media at school. 85.9% of the participants claimed to be also using the learning management system in other subjects, outside the Burgenland Croatian lessons. The digital textbook supplement “Na putu” was primarily used in the Burgenland Croatian lessons rather than at home, with students mainly working on the school’s desktop computers (61.6%), followed by tablet computers (27.3%), mobile phones (9.1%) or computer notebooks (2%). Regardless of the device used, the students expressed relatively high user satisfaction in terms of the availability of the exercises (93% were highly satisfied or satisfied) and the usability of the tool (85.9% were highly satisfied or satisfied). As concerns the level of difficulty, only a small number of children (18.2%) considered the exercises to be too difficult ( $N = 2$ ) or rather too difficult ( $N = 16.2$ ). The greater part of the students ( $N = 65$ ) did not regularly use the online materials at home. As illustrated in the table below, the exercises most frequently used were listening exercises followed by general revision and vocabulary exercises. In terms of popularity, students also enjoyed these types of exercises most. Notably, the Burgenland Croatian folk songs and the related online exercises were also used by a large number of participants and enjoyed above-average popularity.

	used by % of participants	(very much) enjoyed by % of participants
listening exercises	99	79.8
revision exercises	98	79.8
vocabulary exercises	92.9	73.7
songs with interactive exercises	82.8	60.6
reading exercises	74.7	36.4
online progress checks per chapter	68.7	47.5

**Table 1:** frequency of use and popularity of online exercises

The students' suggestions for improvement in terms of contents include the provision of videos and online games, which 82.9% and 92.9% of students respectively would regard as beneficial. Half of the students (50.5%) would also appreciate an increase in the number of songs.

With regard to motivation and flow, working with the digital textbook supplement was rated as being "fun" ( $N = 48$ ) or "rather fun" ( $N = 41$ ) by the majority of students (89.9 %). Similarly, almost all participants (90.9%) agreed on the potential of the materials to make lessons more interesting and varied. This result is further supported by a clear tendency in favour of keeping both the paper-print textbook and the digital supplement (84.8%) rather than just using the textbook. Only a minority of students (42.4%) claim that they started to get bored after a few weeks. However, most students seem to have worked persistently: when asked whether they tried hard to solve as many exercises as possible, most students (86.8%) strongly ( $N = 54$ ) or rather agreed ( $N = 32$ ). Almost all students (90.9%) regarded the instant feedback function as helpful ( $N = 68$ ) or rather helpful ( $N = 22$ ). As concerns self-directed learning, most participants (84.8%) say they did the exercises on their own with hardly any ( $N = 44$ ) or no help ( $N = 40$ ) from their teachers. On a similar note, a great part of the pupils (81.9%) claim they worked more independently in this project than in other lessons. Interestingly, a Mann-Whitney Test (data is not normally distributed) showed significant differences between male and female participants in the evaluation and use of the digital textbook supplement in only three areas:

Indicate how much you agree:	$\bar{x}$ girls	$\bar{x}$ boys	Mann-Whitney U	sig
<b>With the digital textbook supplement ...</b>				
I have worked more independently than before.	3.30	2.96	955.50	0.049
I have practised more than I would have without.	2.87	2.40	892.50	0.017
I have also practised at home on a regular basis.	2.48	1.82	749.50	0.001
<b>number of exercises solved</b>	74.06	67.77	799.50	0.709

**Table 2:** significant differences based on gender

Girls used the materials significantly more at home than boys. Generally, compared to their male counterparts, female participants believe more strongly that the exercises made them practice more as well as more independently. As concerns the actual number of exercises solved, girls seem to have worked slightly harder than boys. However, the difference is not significant.

## 5 Conclusion

The findings suggest that pupils in lower secondary education appreciate the provision of a digital textbook supplement for the minority language Burgenland Croatian. They welcome the opportunity to practice online in a subject, where there has been a lack of interactive multimedia materials, in particular with regard to listening comprehension exercises. Furthermore, students welcome the instant feedback function and generally seem satisfied with the possibility of working independently, which appears to enhance their motivation. Whether these findings can be confirmed by the teachers participating in the project still needs to be analysed. In the course of the research project, the teachers were interviewed at the end of June 2018 in order to see how they evaluate the digital textbook supplement. The analysis of these semi-structured interviews, which is currently in progress, will offer further insights into the effectiveness and efficiency of digital supplementary materials for less commonly taught languages such as Burgenland Croatian.

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