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**Promoting Innovation and Collaboration among
Future Teachers of English at Secondary Schools.**

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1. Introduction

"iPads and interactive books created with iBooks Author can do great things, but the creativity and innovation of the teacher and the content is what makes them shine."

Pamela Johnson 2015

Technology is becoming more and more predominant in the field of education and consequently the integration of technology in the classroom is vitally important. Teaching in an iPad-equipped classroom does not lie ahead and is prevailing as it never was in the past. Therefore, consequences arising out of the technical development will lead to a change in the way we teach and thence not working with technology in university courses in order to prepare future teachers is out of the question.

Pamela Johnson is aware of the benefits which can come along with the use of "iPads and interactive books created with iBooks Author (Johnson & Vanspauwen 2015). Hence, she points out that the creativity of the teacher and the content of the iBooks are key elements for the successful integration of iBooks in the classroom. This shows that in her opinion teachers have a major impact on the effect of iBooks in the classroom. Being able to create own content with the application iBooks Author, teachers have to be aware of the impact which they can have on the students learning process. Teaching with technologies like iBooks, without integrating and making use of their benefits for education, do not necessarily lead to positive outcomes. This means that teachers should be able to work with technologies, make use of their creativity and create content in order to effectuate the learning process of their students.

An expedient integration of technology in education presupposes the integration of technology in teacher-training, which is the aim of the Erasmus+ project initiated by the University of Karlsruhe. The proPIC project promotes "professionalism, innovation and transnational collaboration in foreign language learning and teaching using mobile technologies" (pro-piceuropa.com). Within the cooperation of the five European partners: Newcastle University (UK), the University of Barcelona (Spain), the University of Borås (Sweden), the University of Kiel (Germany) and the University of Education Karlsruhe (Germany) future teachers work with interactive tutorials (iBooks) on iPads in order to widen their knowledge, explore

digital tools and online environment (propiceuropa.com). The project runs from September 2017 to September 2020 and provides the basis for this investigation.

In this paper electronic books as a rapidly growing alternative to traditional textbooks (Brueck 2014), the use of multimedia tools and the benefits of working with iBooks and iBooks Author are considered within the context of *Second Language Learning*.

The interactive iBooks used in the proPIC project have their seeds in eBooks which primarily were intended for adult readers who could read and store digital books on a handheld device. But “as digital technologies and devices have continued to evolve and improve, we are beginning to see a larger market for eBooks aimed at children, or children’s e-literature” (Brueck 2014). The “capability to incorporate a variety of multimedia technology into eBooks” is one reason why iBooks are the eclectic blend of “multiple modes such as text, graphics, animations, audio, etc.” (Kim n.d.,311). Therefore iBooks, getting more and more interactive and appropriate for the use in education, broke into new markets and were seen as a beneficial tool for the secondary classroom.

However, the evolution in practice of working with iBooks in regular classes turns out to be difficult because of the deficient training of prospective teachers. On account of this the impact of the use of iBooks in university courses will be on focal of this investigation. The purpose will be to describe whether, when provided access and instruction in university courses, future teachers use iBooks to support *Second Language Learning* in the classroom.

2. Innovation in the Training for English Language Teachers

In this section the importance of the integration of innovation in the training for English language teachers in university courses will be discussed.

The UNESCO stated already in 2002 that

Information and communication technology (ICT) has become, within a very short time, one of the basic building blocks of modern society. Many countries now regard understanding ICT and mastering the basic skills and concepts of ICT as part of the core of education, alongside reading, writing and numeracy (UNESCO 2002,8).

Therefore, training in ICT skills is indispensable in order to qualify prospective teachers for the use of technology in their own classes with the aim to prepare their students who will need the basic skills and concepts of ICT in their future lives.

The literature suggests that integrating *information and communication technology* into initial teacher education is essential to accomplish the intended change in developing prospective teachers' technical information and communication technology skills (Kırkgöz 2014, 141)

thus it appears that “[...] teacher candidates need to be supported in the effective use of *information and communication technology* in their courses” (Kırkgöz 2014, 160).

Byer for example is of the opinion that “Teachers, schools, districts now have the responsibility to teach according to new technological standards. Our future is based on new ways of communicating, and we owe it to ourselves and our students to teach using this technology” (Byer 2014, 62). Yet teaching with the right application of technology cannot be properly implemented in our educational system if teacher educators do not foster teacher candidates “to regular modeling of technology in their own courses and provide opportunities for them to engage more with technology” (Kırkgöz 2014, 161). Not till then “teacher candidates can be expected to integrate them in their primary and secondary school classrooms, in the future” (Kırkgöz 2014, 161).

For example, Samuel and Zitun found out that the extent to which teachers are given time and access to pertinent training to use computers to support learning plays a major role in determining whether or not technology has a major impact on achievement (Samuel and Zitun, 2007, 10).

In consequence, if prospective teachers would have convenient training in their computer skills during their studies it would benefit the prosperity of the learning process of their future students in the classroom. Making them more professional for the meaningful use of technology in the classroom, one could say that prospective teachers would be more aware of where, when and how to use technology in their teaching.

Future teachers should be aware of the importance of technology in today's society and therefore should include technology more and more in their teaching in order to foster the, inter alia, the computer skills of their students. Innovative technologies are found everywhere in our and our students' everyday life. On account of this it is important to consider the integration of appropriate learning tools and technologies in our education. While educating and teaching students it is vitally important that the aim to prepare students for their future lives is implemented. This definitely includes the meaningful integration of technology in the classroom, in order to train practical skills, which students need in the new global economy. Gitsaki et al. even extended the idea that students need new learning outcomes and defined the "four C's: Critical thinking and problem solving, Creativity and innovation, Communication, and Collaboration" (Gitsaki et al 2013, 13). While working with innovative digital tools in the classroom students need these key competences in order to expand their knowledge, work independently and also to find their right place in the world of employment. Different frameworks for teaching and learning, e.g. *The Partnership for 21st Century Skills Framework* also included the *four C's* as an important element in their vision (Partnership for 21st Century Skills). To qualify teachers who are able to imply the *four C's* and prepare their students for today's global economy it is important that, first and foremost, these key skills are integrated in the studies of prospective teachers. Not only the fact that technology is more in our lives than ever but also the affective effect of technology is one reason why innovation in the field of education is fundamental. Since "motivation is one of the most important factors which influences second language learning" (Dörnyei 1998; Gardner & Lambert 1972) technology could be considered as an instrumental way of motivating students. Creating a learning atmosphere in which the learners are Driven and pleased to learn could be possible with the help of exiting digital tools and new media. In order to achieve this approach, we have to create different learning opportunities and think about combining innovative technologies and new teaching styles with traditional methods of teaching.

Considering all of this the integration of technology in teachers training courses seems necessary in order to qualify future teachers for their use of technology in their classes. Prospective teachers need appropriate technology skills in order to be able to teach and mediate with the help of technology in their own classes. At this point the importance of incorporating *Information and communication technology* in university courses becomes noticeable.

As Kırkgöz states

teacher candidates should be encouraged to experience and be empowered by developing their technology skills to produce instructional materials is a challenge, but one which is essential for teacher educators to meet [...] (Kırkgöz 2014, 160).

This implies that motivating future teachers for the use of technology and the creation of their own materials with the help of their own technology skills is vitally important and should already be integrated in university courses.

Facing this challenge universities should be aware of their important role and should think of ways to improve technology skills and motivate prospective teachers to use new technologies for their own teaching while showing them the benefits of the use of educational technologies. An example could be the production of their own teaching materials. Future teachers should gain awareness of what comes along with the emerging of technologies. Thinking of all the advantages for the education they also should bear in mind the disadvantages which come along with the use of technology.

Creating a susceptibility to the right use of technology in the classroom is a challenge educators have to face in order to avoid the overuse or rather the disproportionate use of technology.

2.1 Promoting Innovation and Collaboration in the ProPIC Course

The following chapter is giving an overview of the theories implemented in the proPIC project and general information about the course.

proPIC Europa is an Erasmus+ project, initiated by the University of Education Karlsruhe, which runs from September 2017 to September 2020. Five European partners¹ working collaboratively for the purpose to “foster online collaboration, explore digital tools and online environment” (propiceuropa.com). All partner universities

intend at empowering both, prospective teachers and themselves, teacher educators, to actively engage in lifelong learning processes and to cooperatively establish a culture of self-reflection, innovation and interculturality in foreign and second language learning and teaching (propiceuropa.com).

Therefore, the partners generated together

a framework for a study programme that promotes professionalism, innovation and transnational collaboration in foreign language learning and teaching using mobile technologies which can be integrated in different curricular (propiceuropa.com).

With this project the partner universities “aim at testing an innovative and transnational course setting which is planned for two semesters” (propiceuropa.com). The study programme is a compound of two courses (Course I and Course II), with five modules (Module I.A, Module I.B, Module I.C & Module II.A, Module II.B) and one study week.

Studying the modules at their own university the students participating in the proPIC course have the chance to go abroad to one of the five partner universities. During this study week they get the one-time opportunity to go abroad and meet the educator of another university.

“The equivalent of this whole programme will be 8-10 European credit points (ECTS points)” (propiceuropa.com).

Within the project the courses will run three times in 3 years, starting in Spring 2018, half a year after the project has started (summer semester 2018). Per course and partner institution there will be 12 prospective teachers taking part in the courses. These students (one cohort) will take the course for a about year (two semesters), although the exact duration will differ depending on the partner University (propiceuropa.com)

¹ Newcastle University (UK), the University of Barcelona (Spain), the University of Borås (Sweden), the University of Kiel (Germany) and the University of Education Karlsruhe (Germany)

Cohort 1: summer semester 2018 & winter study week: 10 - 14 September 2018
semester 2018/2019

Cohort 2: winter semester 2018/2019 & study week: 06 - 10 May 2019
summer semester 2019

Cohort 3: summer semester 2019 & winter study week: September 2019
semester 2019/2020

The “overall aim is to empower future teachers to become more aware of their own professional development and get the know-how of how to constantly reflect on their own practices” (propiceuropa.com). Collaborating with all the project partners from Germany, Spain, Sweden and the United Kingdom and their students the instructors aim “to establish an international network that shares experiences and innovative ideas in the field of second language teaching and learning” (propiceuropa.com).

In order to reach those goals students participating in the proPIC course constantly worked with digital tools and new media. While working on certain topics they also constantly reflected on their own use of the tools and technologies. One of the meaningful tools used in the course are the interactive textbooks in form of iBooks which were used throughout the proPIC course broaching for example the issues of *Continuing Professional Development* and *teaching with New Media*. While working with iBooks most of the prospective teachers made their very first experiences with interactive textbooks in general and were able to get to know the different features of them while dealing with the topics covered in the diverse chapters of the iBooks. Therefore, the proPIC project provided an opportunity for the students to work with iBooks, while learning more about the topics included in the seminar which also integrated the learning process of how to create their own iBook using the application iBooks Author. Being able to create an own interactive iBook the prospective teachers learned a lot of new alternatives on how to illustrate information, create interactive tasks and guide their students through their learning.

2.2 Teaching through Technology

It seems as if future language learning and teaching is going to shift more and more towards the use of *innovation and technology integrated learning technologies*. On account of this instructors should become aware of how technology might be used to enhance *Second Language Learning (SLL)*, since “[...] developments in information and communication technology and its applications in teaching and learning call for teachers to effectively use the new learning tools in their instructional practice” (Kırkgöz 2014,141). As Dooly (2008, 23) states,

[i]f we are truly interested in preparing our students to be responsible citizens in an increasingly technologically advanced society, then our way of teaching our students must reflect this” (Stanley n.d., 62).

“In point of fact ‘learning technologies are becoming more normalized in language classrooms’, as Bax (2003) predicted, and teachers are beginning to ‘stop seeing them as technologies and start seeing them as tools which suit some purpose and not others’” (Stanley n.d., 62). One reason for that are the pedagogical benefits which come along with the right commitment of technology in language learning settings. Using technical resources, it is feasible to create a learning space in which differentiated instruction is possible. That is one of the many reasons why technology enhanced learning is getting popular in the field of education.

One of the most interesting emerging types of technology enhanced learning is the “*Mobile Assisted Language Learning (MALL)*”, especially now that mobile devices are carried by more and more people every day” (Stanley n.d., 59), and that the mobile phone

has evolved from a simple voice device to a multimedia communications tool capable of downloading and uploading text, data, audio, and video – from text messages to social network updates to breaking news, the latest hit song, or the latest viral video

and that it can also “be used as a wallet, a compass, or a television, as well as an alarm clock, calculator, address book, newspaper, and camera” (Kelly and Minges 2012, 11). The outcome of this is the diversified applicability of mobile devices in the classroom. Especially in secondary education this is significant since “nearly every student carries a mobile device, making it a natural choice for content delivery and even field work and data capture” (Johnson et al., 2009).

This combination of available applications and a device that learners usually carry offers an opportunity to introduce learners to tools for study which could help them in later life, as well as new motivating ways of learning a language (Stanley n.d., 59).

Instructors should be aware of this kind of advantages which come along with technical development and should find ways of integrating and making use of them in their classes rather than holding on to old fashioned teaching styles due to the fact that using technology to enhance language learning “allows for increased learner autonomy and control, providing a more student-centered pedagogy” (Jewell 2006, 178). Being in the center of their own learning process and “more actively engaged in their learning than in traditional direct instruction methods” (Jewell 2006, 178) students can play an active role in their own learning.

Thinking of *Mobile Assisted Language Learning* one should not only consider mobile phones as an efficient resource for the classroom but also portable computers such as tablets or iPads which are easily insertable in the classroom in order to create a new learning space for students. Using tablets for the purpose of *Second Language Learning* can be very beneficial for students’ listening, writing, reading and also speaking skills while also fostering their technical skills by working with technical devices for their language learning. So, the use of mobile devices for the purpose of *Second Language Learning* can eventually effectuate that the students develop their technical skills further. Finding ways to combine *Information and communication technology (ICT)*, *Mobile Assisted Language Learning (MALL)* and *Second Language learning* poses an exciting challenge but is not one which cannot be solved.

3. Working with Interactive Textbooks

Using technology in the classroom is according to Gitsaki et al. “generally related to an increase in student performance when interactivity and other important features of instructional design are applied to its use” (2013, 11). That means that the instructional design which is used in the lesson has a great impact on the achievements of the students. For this reason, it is important that teachers precisely think on how to create tasks and give instructions in a meaningful way and think of tools which can support their purpose.

One of the possible tools for the use in the classroom are interactive textbooks. They combine several interactive features and different instructional designs, thus are student-centered and student-activating. Other than “regular textbooks” within interactive textbooks you have the facility to integrate interactive widgets or apps amongst other things.

At this point it is important to define the difference between a “regular textbook” and an interactive textbook. Baldwin clearly differentiates between “traditional textbooks, eBooks and interactive textbooks” and consequently describes the difference between an eBook and an interactive iBook (2015, 2). According to her “a traditional textbook (...) is printed on paper” and “it is two-dimensional” (Baldwin 2015, 2). Interaction with the book is possible by “reading it, taking notes, and perhaps, working the assignments and examples included therein” (Baldwin 2015, 2). And one of the important characteristics of traditional textbooks is that they do not include “overt interactive content” (Baldwin 2015, 2).

An eBook on the contrary “is a book that is accessible via computer or other electronic device (including iPad, Kindle, etc.)” and are mostly “not interactive” (Baldwin 2015, 2). Baldwin states that “most eBooks are simply electronic copies of the paper version of a textbook, usually delivered in PDF format” (2015, 2). The outcome of this is that eBooks are “identical to their paper twins, but simply accessed via computer or tablet technology” and therefore they do not provide interactive content (Baldwin 2015, 2).

Last but not least Baldwin defines the “interactive eBook (iBook)”. Unlike a

traditional texts and traditional eBooks, an interactive textbook can include multimedia, such as videos or interactive graphics, as well as review quizzes, photos with labels, photo/graphic galleries and more (Baldwin 2015, 1)

which makes the interactive textbook much more interesting. So iBooks are “potentially, full of content that goes beyond text, diagrams and photos” since it can also include for example

videos demonstrating the example step by step with the professor (author) working the problem through by hand (video recorded using a tablet PC) or in Excel (video recorded using any PC with

Microsoft's Excel) or using narrated PowerPoint slides to illustrate the example's solution step by step (video recorded using any computer with Microsoft's PowerPoint) (Baldwin 2015, 2).

Students appreciate learning directly from the professor, even in an online course. This book is clearly the work of their professor, is designed specifically for them, and all the audio and video in the book is in the professor's voice and so forth. This, no doubt, helps students feel more connected to the professor (Baldwin 2015, 4).

One advantage of interactive textbooks is that educators are able to create their own content with the application iBooks Author. Often teachers have to work with specific literature or textbooks in class which are provided by their school. This can cause that teachers are not fully convinced by the content of the materials which are provided. If this is the case, they possibly have to create their own material for the lesson. Being able to create an own interactive textbook, educators have the power to create their textbook in the way they need it to be for their teaching goals. Using the application iBooks Author educators "need not be a technology genius or have experience with textbook layout since templates are provided for several types of organization." (Baldwin 2015, 4). While creating an own textbook with iBooks Author the advantage is "the ability to put interactive elements into a textbook" (Baldwin 2015, 4). But creating an own interactive textbook is not a small task. "Any faculty member should consider (...) the amount of time and effort needed to develop a textbooks or other materials" (Baldwin 2015, 4). "However, it is much simpler than one would think, a priori. The pay-off is large, because an interactive textbook can deliver so much more than a traditional text." (Baldwin 2015, 4). Nevertheless, educators should have a critical attitude toward the use and development of an own interactive textbook and should also think of possible organizational difficulties which can occur. One of the main questions which should be thought of before creating and using an interactive textbook is: "Does the current IT infrastructure support this integration?" (Gitsaki et al. 2013, 13). While using interactive textbooks in class the students necessarily require access to mobile devices and probably also need connection to the internet. Therefore, educators need to be aware of the fact that they have to ensure that every student has access to the content they created.

All in all, one can say that iBooks are the most interactive digital textbooks, which make them interesting for the use in the field of education especially for language teaching and learning. "Making content knowledge accessible on a mobile device anytime, anywhere at the learner's pace using a mobile device", iBooks as a tool correlate with the definition of "mobile learning"

by Gitsaki et al. (2013, 12). A supportive argument for the use of interactive textbooks is the accessibility on mobile devices. Having access to several interactive textbooks (iBooks) on one single device creates an uncomplicated arrangement for the learning process of students.

3.1 Interactive Textbooks in the proPIC Course

As part of the proPIC course the students worked with “open and interactive tutorials in form of iBook chapters” (propiceuropa.com). These iBooks were

collaboratively developed and designed by the partners of the project and comprise the know-how and best-practice examples on how to use mobile technologies for CPD, as well as methods of research-oriented learning and teaching (propiceuropa.com).

Students who participated in the proPIC course had access to seven interactive tutorials with which they had the chance to work with. Four of the interactive tutorials were mandatory and every student had to work with them in order to create a basic knowledge. In addition to that the students also had three elective tutorials from which they could choose one or more. Overall each prospective teacher had to take part in five or more tutorials.

interactive tutorials



Introduction: Continuing Professional Development (CPD)	University of Education Karlsruhe (@Laura Kringe)	mandatory
Interactive Tutorial 1: Approaches to teaching and learning with technology	Newcastle University (@Elizabeth Hidson)	mandatory
Interactive Tutorial 2: ePortfolio	University of Barcelona (@Azahara Cuesta)	mandatory
Interactive Tutorial 3: Video Enhanced Observation	University of Education Karlsruhe and Newcastle University (@Laura Kringe, @Elizabeth Hidson)	optional
Interactive Tutorial 4: Video Production	University of Kiel (@Kira Seeler)	mandatory
Interactive Tutorial 5: Innovative digital tools and methods	University of Boras and University of Education Karlsruhe (@Tobias Ruhtenberg, @Richard Baldwin, @Laura Kringe)	mandatory
Interactive Tutorial 6: iBook	University of Education Karlsruhe and University of Boras (@Laura Kringe, @Tobias Ruhtenberg, @Richard Baldwin)	optional
Interactive Tutorial 7: Working in the field of research	University of Education Karlsruhe (@Laura Kringe)	optional



<http://www.propiceuropa.com/interactive-tutorials.html> (accessed Aug 17, 2018).

3.2 Fostering Interactivity and Understanding with iBooks

The use of the iBooks in the proPIC course entailed a lot of changes in the way of teaching and learning in this special university course. Using iPads in the classroom and creating content needs a lot of creativity and motivation of the teachers who want to use these technologies in their teaching practices. The iBooks the students worked with in the proPIC course showed the prospective teachers which possibilities they have and which features/widgets iBooks provide their users. Working through the interactive books the future teachers had the chance to experience their own learning process and therefore they also could think about the advantages and disadvantages of the use of iBooks in the classroom.

This chapter focusses how interactive books made with iBooks Author can promote language learning and in which way the iBooks used in the proPIC course fostered the learning process of the future teachers taking part in the project.

Creating in-text activities are the easiest way of integrating interactivity in iBooks. Features like highlighting in the text make it possible to create for example grammar noticing activities in which “students can underline or highlight rhetorical features or answers to comprehension questions” (Johnson & Vanspauwen 2015, 3). The included widgets in iBooks Author make it possible to add multiple choice questions which give the students immediate feedback and the right answer to the question. The disadvantage of this widget is that the solution and the outcome of students’ work cannot be sent to the teacher (Johnson & Vanspauwen 2015, 4).

Not only do the creator of the interactive iBook can be creative but also the students who work with the Book afterwards, making the learning process a special one. The learners who work with iBooks can directly work with the text and e.g “select a question, add their answer as a note, and refer to it in the notebook” (Johnson & Vanspauwen 2015, 5). Linking the exercises directly to learning activities iBooks provides the feature to create learning cards within the interactive Book. These study cards can be found in the “study” section of the iBook. While recording the study process by creating the learning cards students also prepare themselves helpful flash cards with which they can learn in the virtual environment. These study cards provide the question on the front and the answer on the back, so that the students can read the question first before they flip the card to check their knowledge.

Working with texts using iBooks provide a lot of opportunities which traditional books cannot offer. Students who work with the text in an interactive book can click on a word and search

for a definition. Additionally, the teacher can create a list of definitions in the glossary section of the iBook, making it easier for students to get to information they need. Another tool the students can use is *Siri*, a virtual assistant who can read texts aloud to the students. For this function the students have to highlight the text and click on “speak”. While Siri is reading out the texts students can turn on “Highlight Words” and can follow Siri and spot where she is reading in the text. Another way of integrating the function of reading out texts is to insert a sound-file widget into the iBook. The iBook *Approaches to teaching and learning with technology*, which was part of the proPIC course, directly integrated a widget which played a sound file recorded by the teacher who created the iBook. This way the creator of the book can be sure that the text is read out with the right pronunciation and by someone who’s voice is familiar and natural. Not only sound-files can be directly inserted in the iBook but also videos, online articles, websites, mind maps, graphics, animations etc. which can also be combined within. As Kim states the “multimedia elements of iBooks Author include an eclectic blend of multiple modes” (Kim n.d., 311) offering a lot of options for teachers to create their own content.

The integration of images in iBooks can be very exciting, not only for the reason that students can zoom in the pictures, but also for the different widgets the creator can use while inserting pictures in the interactive book. Image carousels for example make it possible to link information directly in the picture or “zoom-in” pictures within the picture where students can get a detailed view of what is represented in the picture. Using hotspot images students can click on the image for a pop up which can be a sound file, a website, a definition, a video etc. A great tool for e.g. showing a process is the *frame sequence* widget where students can slide through different pictures/maps/animations and observe a possible change (Johnson & Vanspauwen 2015, 6). Not all of the widgets explained above are directly available on iBooks Author, but it is possible to create them on *BookWidgets.com* and easily integrate them in iBooks.

Being able to extent the interactive iBooks with apps makes iBooks to a varied tool which can be easily adapted for the use in the classroom. To motivate students to be creative and in order to foster their technological skills apps can be very helpful. Their broad applicability could make the layout of an iBook even more interesting for students. Johnson & Vanspauwen thought of different ways on how to integrate apps with the intention to create tasks with a hands-on experience for the students (Johnson & Vanspauwen 2015, 7). Apps which can be integrated in the interactive Book are for example *Prezi*, *Our Story for iPad*, *Book Creator*,

Numbers and *Keynote*. These apps, which can be added in the layout of a page with a text, make it possible to “ask students to show what they have learned” so that “students can make a presentation on the topic or a spreadsheet or chart that represents their understanding of facts in the text“ (Johnson & Vanspauwen 2015, 7) or, “if students are reading a story”, the teacher could

ask them to write or make a video about how the story could continue, or another way the story could end. Students can create a character study or backstory and publish it using *Book Creator Free* (Johnson & Vanspauwen 2015, 7).

These kind of apps “are also great for student A/student B information-exchange and role-play speaking activities” making the textbook interactive and fostering the collaboration of the students in class (Johnson & Vanspauwen 2015, 7). But not every task or exercise the students can do with an iBook has to be digital. There are a lot of possibilities to train the writing skills of the students since they “can still keep work written with pen and paper on their iPad” (Johnson & Vanspauwen 2015, 9). Combining technology with traditional methods is feasible with the use of the right app. Students “can use a free scanner app like *JotNot Scanner* to take a snapshot of what they wrote on paper, convert it to PDF and save it in their writing portfolio” or they can “create a folder in *Dropbox*, *Google Drive* or *Box* and share that folder with you” making the outcome of the students work accessible for the teacher (Johnson & Vanspauwen 2015, 7). Attention should be drawn here especially to the use of the same service and the right labeling of the folders in order to get the work of the students. With the integration of students’ own work in the interactive book a fully new possibility originates, which is to create a digital portfolio in which students can report and reflect on their own learning process. Writing and planning to write within the iBook can be easier than on paper, since the creator of an iBook has the possibility to integrate apps which can help to find ideas and to structure them before starting to write. For example with the application *Popplet Lite* students can “brainstorm, plan and organize ideas for an essay” or if they want to write a more creative text they can also use the app *A Novel Idea* or *Fiction Idea Generator* in order to “structure the story” before they start writing or they get new “fun ideas” for the story they plan to write (Johnson & Vanspauwen 2015, 10). If the creator of the interactive book does not like the idea of using an external sharing service like *Dropbox* or *Google Drive* to get the students results *BookWidgets.com* offers the possibility to create a “Worksheet” within the iBook so that the students can write directly the essay in the Book, so “that the students do not have to leave the book to write” (Johnson & Vanspauwen 2015, 11). The advantage of this widget is that when the students submit their results the teacher can get them via email, which makes sharing without external services possible. Thinking of

the organization of students results it is a lot more work for the teacher to structure and save the outcomes of the students, since the results submitted via email will be online and should be saved and structured by the teacher. The teacher has to face the challenge of finding the results of his students to give them feedback since once the teacher gets the results the next step will be giving feedback to the students. One of the easiest ways to do so is to “open the PDF of the student work in *Adobe Reader* and to annotate it” here the teacher can also use the “sticky note” function “to give students general feedback” on their work (Johnson & Vanspauwen 2015, 12). The disadvantage of adding annotations and sending them to the students is that the interaction of the teacher and student is only virtually, and it is difficult for students to ask questions about the feedback they get. Additionally, it is often not easy for teachers to explain issues with short annotations and for students to understand what their teacher wants to say. To avoid this kind of misinterpretations teachers can also give their feedback with a video. In order to do so teachers can use the application *Educreations* where they are able to import an image of the students’ essay and record their feedback as a video. Being able to underline, write and highlight directly in the text while recording makes it easier for the teacher to explain.

In general writing directly in the iBook and getting feedback on the outcome is possible with the help of different applications. Students can use *Pages*, *Notes*, *Book CreatorFree*, *Evernote*, *Penultimate* for their writing activities, while teachers can use *Adobe Reader*, *Educreations* or the paid app *Explain Everything* to give feedback to their students.

Not only in writing activities can mobile apps, integrated in an interactive Book, assist language learning, but also when it comes to listening tasks. Listening comprehension tasks, which are with traditional teaching methods only feasible in the classroom where the teacher has the control over the audio file, are also integrable in an iBook. The creator of an iBook is able to design with *BookWidgets.com* a page where students can listen to an audio file as many times as they want in order to be able to answer the exercises of the listening comprehension task. Hence the students can work individually at their own pace and listen to the audio file as often as they need to, answer the questions about the audio file and submit it to their teacher via email. The teachers on the other side “have flexibility to do a listening lesson in class or as homework” (Johnson & Vanspauwen 2015, 16). Training the pronunciation of a foreign language is often a challenge which teachers have to face. Using the ‘multimodality’ (combining words, images, and sounds) of iBooks can help to foster foreign language learning especially regarding pronunciation (Stanley n.d., 58). With the use of the widgets provided in iBooks Author the creator of an iBook has different possibilities to create listening activities. In order to make students

learn new words and contemporaneous hear their pronunciation the creator of the iBook can link an audio file with the right pronunciation and a picture with the written vocabulary making use of the multimodality of an iBook. The students then just have to “tap a picture or word for the pronunciation” (Johnson & Vanspauwen 2015, 15). Additionally, the feature that readers of the iBook can look up words directly in the dictionary assists the students while learning vocabulary. Students can find “with one tap [...] a definition or search the web to find *Wikipedia* entries and news articles that contain the word” (Johnson & Vanspauwen 2015, 18). The creator of the iBook can write own definitions in the glossary of the book in order to make it easier for the students to work with difficult texts or to learn new vocabulary. The multipurpose utilization of the glossary can create exciting tasks within the iBook. For example, linking grammatical structures to phrases within the text students can click on the phrase and look up the tense of the phrase in the glossary (Johnson & Vanspauwen 2015, 19). Overall the integration of vocabulary learning activities can be designed in a creative and versatile way.

The iBooks which were created for the use in the proPIC course made use of some of the widgets which are described above in order to show future teachers which possibilities they have when creating an own iBook with iBooks Author. Integrated sound files in the *iBook Approaches to teaching and learning with technology* helped students to follow the text and read along. Every iBook had images integrated in the layout of the iBook underlining important information. Especially the interactive images with links to informative websites where students can zoom in made the learning experience of the students a special one. Fun activities within the iBooks for example the “coffee break fun!” in form of an image game is a good example for the diverse use of widgets which can create a virtual learning environment where students have fun while working with the iBook. Nevertheless, the iBooks are very informative when it comes to content-related aspects. Including links, which lead the students directly to informative websites or integrated videos, gave the students the possibility to go beyond and find new information and ideas. The widgets iBooks Author offers are sometimes not enough while creating an interactive Book for the use in the classroom. Therefore, a lot of the features in the proPIC iBooks were created by using a widget of *bookry.com*. This is a website similar like *BookWidgets.com* where users can find new widgets which are not integrated in iBooks Author and even create new ones for own need. Every iBook used in the proPIC course has for example a task checklist made with *bookrey.com* where students can tick the tasks they have already finished in order to keep track of their own learning progress. Additionally, every iBook has a feedback section at the end of the interactive book where students can record their

feedback on the use of the interactive tutorial. Since within the proPIC project the courses will run three times in three years it is important to get the feedback of the students in order to improve the iBooks which are also going to be used in the following course. All interactive widgets and features within the iBooks represent the potential use of iBooks in the classroom for future teachers who participated in the course and worked with the interactive tutorials. While learning content-related, the use of iBooks for their learning implied the possible use of interactive books in the classroom for their own teaching, making their learning experience multilayered.

In general, one can say that iBooks can assist language learning, since

[...] eBooks created with iBooks Author makes presentation materials more understandable and facilitates long-term memory by using multiple sensory channels to put forward information” (Kim n.d., 311).

The multimedia integration in iBooks leads to diverse presentations of content which helps students to enhance not only their listening, speaking, reading and writing skills but also their technological skills. Students’ new learning outcomes, defined by Gitsaki et al. as the “*four C’s*” are evolved while working with interactive books (Gitsaki et al 2013, 13). While working with innovative digital tools in the classroom students need these key competences in order to expand their knowledge and work independently. Using iBooks in class leads to more flexibility in teaching, since students can work individually at their own pace. Teachers often face difficulties while teaching students with special need, using iBooks Author teachers can generate material which is designed for the individual needs of students, so that every student can participate. Differentiated learning with interactive Books which are appealing for special needs can help students to find their place in regular schools. However, it should be mentioned that creating an iBook can be very time consuming. The work teachers have to put into designing own teaching material especially in form of an interactive should not be underestimated.

Furthermore, should teachers who want to use iBooks in their classroom ensure that their students have access to an Apple device in order to be able to work with the iBooks. Therefore, they have to be aware that not every school has the financial support to provide their students iPads.

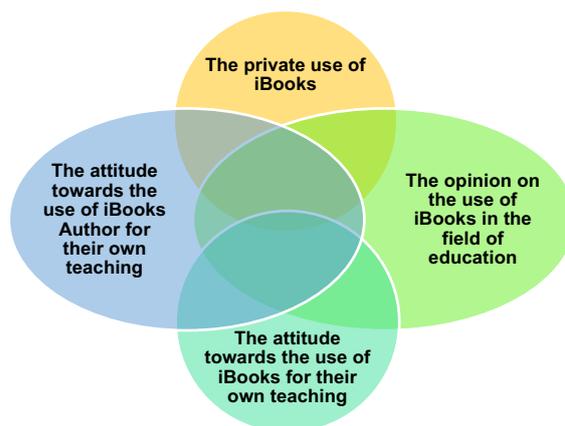
The use of iBooks can entail many positive changes in the learning process of students, but in order to be able to use them in class the teacher has to be aware of potential difficulties with the application and the time-consuming preparation of own iBooks.

4. Research Question

Focusing on the question if, when provided access and instruction, future teachers would use iBooks and iBooks Author to support language learning in their own classroom and in which way including innovation in teachers training can influence the use of technology of prospective teachers for their own teaching. The aim of this investigation is to find out whether it was useful for the students who participated in the proPIC course to use iBooks for their own learning, if they feel prepared to work with new technologies like iBooks and if they would use iBooks in their own teaching. This research searches for the answer to the question whether the use of iBooks in university courses prepare and motivate future teachers to use iBooks and iBooks Author for their own teaching.

In order to be able to detect the answers to these questions the students had to answer a survey which consist of twenty-two questions and was specially created for the use in the proPIC project, so only the students who took part in the project could answer the questions.

The survey was centered on four major areas. To get an inside whether the students are familiar with the use of iBooks the investigation had an entering with questions relating to their private use of iBooks. Subsequently different questions about their opinion on the use of iBooks in the field of education followed and also about their attitude towards the use of iBooks for their own teaching. At the end of the survey the participants were surveyed about their attitude towards the use of iBooks Author for their own teaching.



This leads to a picture about the impact of the use of iBooks in the proPIC seminar on the opinion of the prospective teachers is one of the many aims of this research.

4.1 Method/Data Collection and Analysis

The survey which was used for this investigation consists of twenty-two questions and combines quantitative but also qualitative questions. It was designed only for the use in the proPIC project and therefore consists of questions which are concerned with the topic iBooks as a digital tool.

The first three questions of the survey relate to the private use of iBooks of the students who participated in the project in order to get an insight whether they are familiar to the use of iBooks or eBooks. The first two questions are closed questions where the participants have to answer with “yes” or “no”.

1. I read eBooks in private. (closed question)
2. I read iBooks in private. (closed question)

The third question of the survey is an open question which aims to get information about the features of iBooks which are liked by the students in order to get a first general view of the students about iBooks.

3. What do you like most about iBooks?

Furthermore, the survey includes several Likert scale questions. These questions give a deeper insight into what the students are thinking on the use of iBooks in the field of education and how they feel. The students were provided with a series of statements, for which they had to select one. The provided answers were:

1. “Strongly Agree “
2. “Agree “
3. “Neither agree nor disagree”
4. “Disagree”
5. “Strongly Disagree”

The opinion of the students on the use of iBooks in the field of education were surveyed with the following questions:

4. iBooks are effective tools in the field of language education. (Likert scale)

5. I think that iBooks facilitate learning a second language. (Likert scale)
6. In which way could the use of iBooks in school foster collaboration and authentic language learning? (open question)
7. The use of iBooks can improve students' **understanding**. (Likert scale)
8. The use of iBooks can improve students' **engagement**. (Likert scale)

The opinion of the students towards the use of iBooks for their own teaching were captured with questions nine to seventeen.

9. I enjoyed working with iBooks in the proPIC course. (Likert scale)
10. Please rate how much you liked working with the specific iBooks in the proPIC seminar. (Rating)
11. Which features of your favorite iBook did you consider as most helpful?
12. In my teacher training, I got in touch with iBooks next to the proPIC course. (Likert scale)
13. I would appreciate using iBooks in other university courses, too. (Likert scale)
14. I feel prepared for **using** iBooks in my own teaching. (Likert scale)
15. I am going to use iBooks in my own teaching. (Likert scale)
16. What are the possible **challenges** of using iBooks for your own teaching? (open question)
17. What are possible **advantages** of using iBooks in school for language learning? (open question)

The attitude of the students towards the use of iBook Author for their own teaching were surveyed by the last questions in the survey. Giving an all-around overview whether the students are motivated and feel prepared to create their own content using iBooks Author.

18. Do you know the difference between iBooks and *iBooks Author*? (closed question)
19. I feel prepared for **creating** iBooks using the application *iBooks Author* for my own purposes. (Likert scale)
20. I am going to use *iBooks Author* for my own teaching. (Likert scale)
21. What are the possible challenges/advantages of using *iBooks Author* for your own teaching? (open question)

22. What possible topics/tasks/activities/materials could be included in an iBook that you would use for your own language teaching? (open question)

All these questions were put together in an online survey which was created with *LimeSurvey*. The students who already participated in the proPIC project could easily take part in the survey by clicking on a link which directly lead them to the questionnaire.

Therefore, every partner university got a link which lead the students directly to the survey. Being able to answer the question on a computer or the smartphone the students had no difficulties to get access to the questions. Except of the closed questions the students had with every question a space where they could leave their comments to the questions, even if the Likert scale questions often do not need additional explanations.

4.2 Student Participants

Participants of this study will consist of students from the five different partner universities who participate in the proPIC project. Therefore, the students from Newcastle University (UK), the University of Barcelona (Spain), the University of Borås (Sweden), the University of Kiel (Germany) and the University of Education Karlsruhe (Germany) are surveyed in an exemplarily manner. The results of this study will be generalizable to the participating universities.

4.3 Results and Discussion

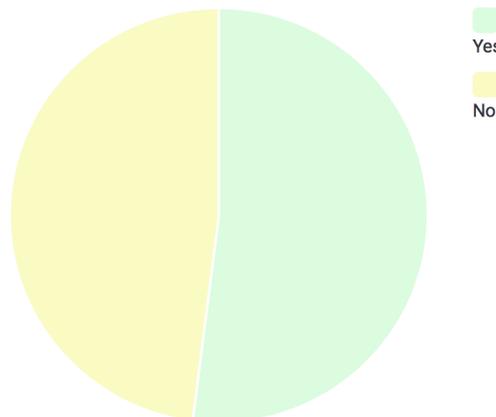
In the following chapter the results of the online survey will be presented. In total 27 students from the partner universities participated in the survey. Eight students did not completely answer every question of the survey and submitted a partial response whereas nineteen students submitted a full response.

The results of the survey are presented in percentages and in form of either a pie chart or a bar chart. In addition, the response options of the questions are listed with the count of students who choose that option. Most of the questions had an extra text box where students who participated in the survey had the opportunity to write down their comments. This is also presented in the charts in order to outline whether the participants had additional comments on the question or not. The survey was anonymous and therefore also the quotes included in the results in this chapter remain anonymous.

The private use of eBooks of the students

I read eBooks in private.

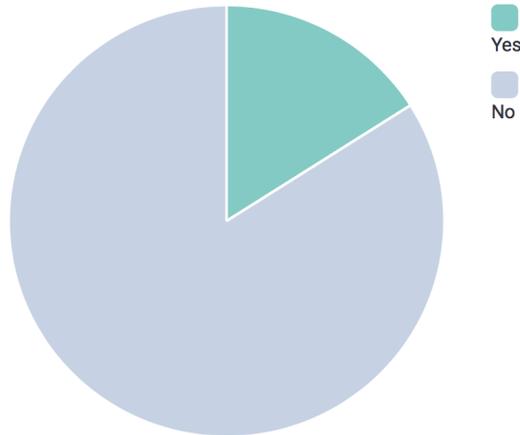
Answer	Count	Percentage
Yes (Y)	13	52.00%
No (N)	12	48.00%
No answer	0	0.00%



Examining the closed question “*I read eBooks in private.*” Where the students could decide between the response options “Yes” and “No” it is apparent that more than half of the students do read eBooks in private (52%) whereas less than the half (48%) do not prefer eBooks which shows that nearly half of the students already have experience with using electronic books and do read them in private.

I read eBooks in private.

Answer	Count	Percentage
Yes (Y)	4	16.00%
No (N)	21	84.00%
No answer	0	0.00%



Assessing the second closed questions of the survey it becomes noticeable that the students who participated in the survey prefer to use eBooks in private. While 52% said that they read eBooks in private only 16% of the participants confirmed that they read eBooks.

The third question “*What do you like most about eBooks?*” was an open one, so that the students could write their thoughts without limitations. Most of the students pointed out that they like the mobility of the use of eBooks.

“What I like the most about eBooks is that I have access to them anywhere, and I don't need to have a printed copy in order for me to read.”

“Take less space. Always [sic] know on what page I ended my reading last time. Simple to share interesting parts.”

“You can read them whenever you like and at anytime.”

Other students stated that they like the design and layout of eBooks and especially the interactivity eBooks offer for their users as well as the multimedia integration.

“They have an appealing design and often combine a variety of different media.”

“The layout is very smooth and nice to look at. The interactive features are also nice.”

“The interactivity.”

“The fact that they are really interactive.”

“The different media that can be included.”

One student already had experience in creating an own eBook in her/his teacher training and shared it with students who liked the outcome. This leads to the conclusion of the future teacher that she/he would like to use eBooks in future classes too.

We have created an eBook as part of our education to become teachers F-3, @ the University of Borås (as we are lucky to have Tobias Ruthenberg as a teacher who has good knowledges). I think that was very interesting and sth. I would like to give my future pupils the possibility to try that. The pupils I showed the eBook liked it very much.

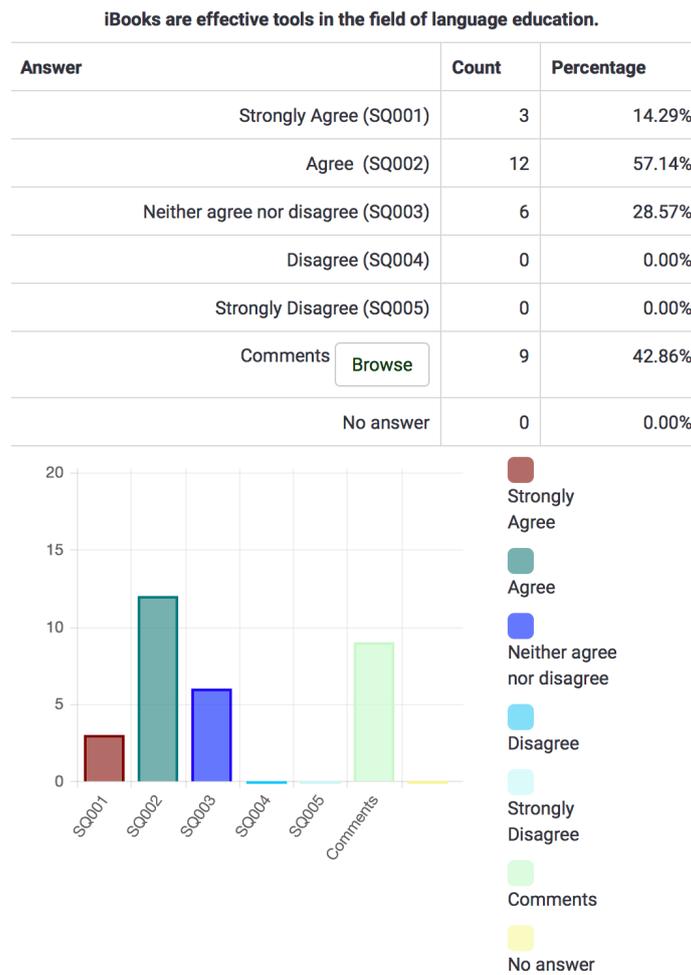
Other students on the contrary have a negative point of view and are not interested in using Apple products included iBooks.

“Like? I hate them, because I despise Apple as enterprise at all means.”

“I don't like Apple products, but I've been told ibooks [sic] allow readers to share and read opinions and comments from other readers.”

In general, different opinions on iBooks are expressed but the positive ones outweigh. The fact that iBooks carried on a mobile device are portable and readable at any time, the multimedia integration, the interactivity and that students do like to work with them makes it interesting for future teachers to work with iBooks in educational settings. Nevertheless, iBooks as an Apple product is not liked by every prospective teacher.

The opinion of the students on the use of iBooks in the field of education



Within the fourth question of the survey 57,14% of the participants agreed with the statement that *“iBooks are effective tools in the field of language education.”* Showing that the prospective teachers can see a potential in iBooks for the use in the classroom. While 28,57% of the participants could not decide whether they should agree or disagree with the claim no one said that iBooks are not effective tools. Nevertheless, the comments show that there are confounding factors which make the prospective teachers insecure if iBooks are a suitable tool for the classroom or not.

“Under certain circumstances, they can be effective tools if used correctly.”

“Suitable devices need to be available for everyone.”

“I think that the problem about iBooks is that it is only compatible with Apple devices.”

“Actually, I believe interactive books to be useful tools in language education, but I think that it should be handy for other software programmes, too.”

“There are other, cheaper and open source applications.”

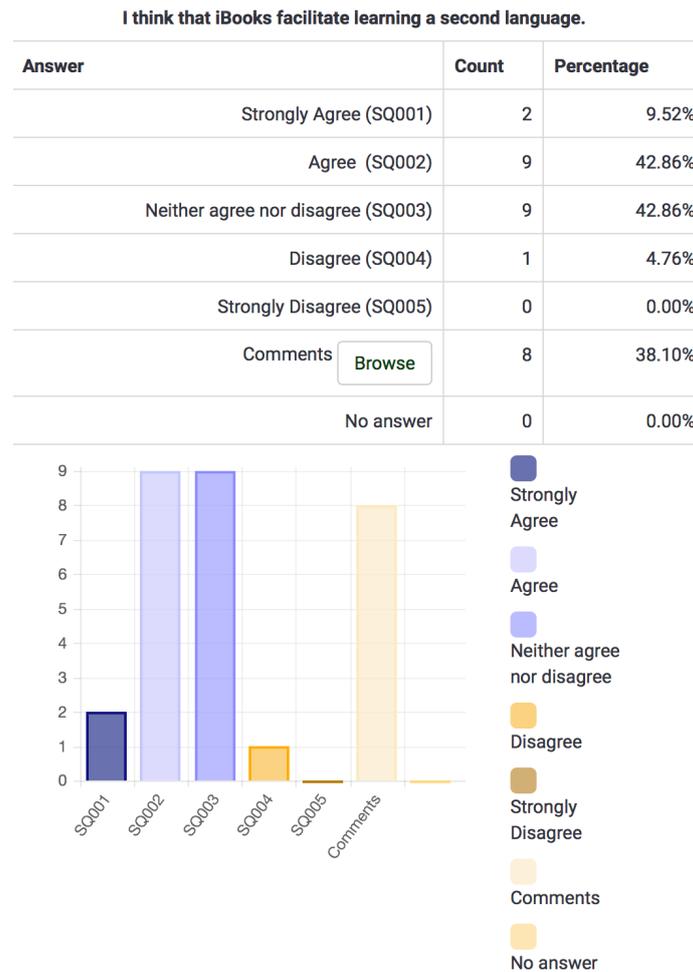
“Ebooks are, not ibooks specific.”

Other comments show that the interactivity and other features of iBooks are the main reason why feature teachers consider iBooks as an effective tool in the field of language education.

“Especially interactive tools within the iBooks where the students can collaborate.”

“I think some advantages is that u can speak/listen to text and it is a good tool in order to include words that u [sic] want your pupils to learn.”

“I think iBooks may foster student motivation.”



The assertion “*I think that iBooks facilitate learning a second language.*” led to two dominant opinions, 42,86% of the participants said that they think that iBooks facilitate learning a second language while 42,86% could not decide if they should agree or disagree. Two participants strongly agreed with it while one participant strongly disagreed with the utterance.

In the comments students stressed the point that the iBook should be designed for language learning in order to foster second language learning.

“It depends on how the iBook is structured and build up.”

“Reading is good for second language learning.”

“It is depending on the iBook but it definitely can be.”

One participant pointed out that it is important to explain the functions of an iBook to the students and that this is time consuming. This is definitely a point which future teachers who are interested in teaching with iBooks have to consider.

“It could only be a facilitating tool in learning a SL if it would not take time DURING the classes to explain the functions of the book. Until now, I rather believe that it is more time-consuming to use tools such as iBooks than to rely on the more traditional media.”

“It can be useful tools, but I don't think that they're enough. I do however think they can be more useful than classic school books.”

These comments show that prospective teachers are aware that integrating iBooks in the classroom without further assistance and support is not enough in order to support language learning.

The following question was *“In which way could the use of iBooks in school foster collaboration and authentic language learning?”* and the participants mostly pointed out that the interactive features which are provided in iBooks can foster collaboration and language learning. Being able to interact through an iBook, share and comment the students who work with iBooks are connected to each other and can work collaboratively.

“Collaboration could be fostered through interactive tools within the iBook eg. collaborative writing projects like a blog or interactive storytelling. Authentic language learning can be achieved through eg. links on authentic youtube videos or audio recordings, exposition to a variety of registers of the target language in the internet and many more things that the teacher can prepare like online discussions and interactive activities. In general iBooks can foster learning because of its up-to-dateness and popularity of media for classroom activities. It is sth. that the students engage with in their freetime and could therefore foster and improve their interest and engagement.”

“iBooks can be shared online, so it's easily accessible by many people from all over the world.”

Also, in the view of the participants the use of authentic materials in iBooks can foster the language learning process of students. Integrating videos or sound files of native speakers would help them to improve their pronunciation while they could work in groups or pairs fostering the in-class collaboration.

“There can be included videos and audios so that the students can learn from native speakers. One could include in the iBooks exercises for the work in pairs or in groups to foster also collaboration.”

Another interesting idea of the participants was the ability to create an online learning environment with iBooks where the students are able to do a virtual exchange. In a telecollaboration project where students can work together in order to widen their cultural knowledge and evolve their language skills iBooks could also be integrated.

“Cooperation with native language speakers if an exchange is not possible/ too early/already took place.”

Finally, creating an iBook with iBooks Author can confer specific benefits. Creating an ePortfolio with iBooks Author is one of the ideas of a future teacher, showing that with the use of iBooks is a lot of space for creativity in the field of education.

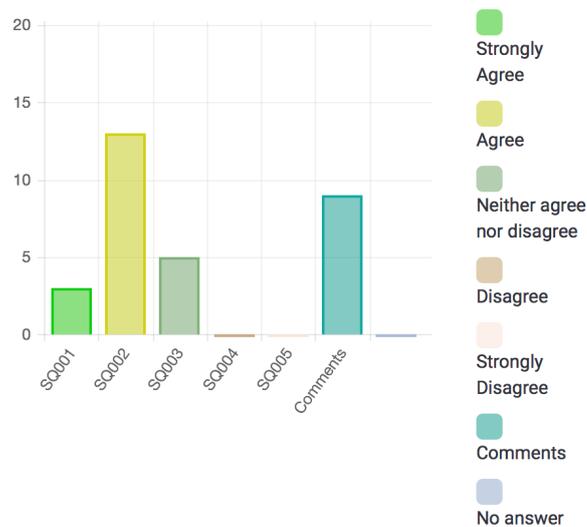
“iBooks could be used as products which means that students could develop their own iBooks (pre-supposing that the school has the technical [sic] equipment) to present their results of specific learning processes.”

“iBooks may be developed in groups and would then allow for collaborative work.”

“Students could each create an iBook like a diary in collaboration with a native speaker and see their own improvement over the course of a school year or longer.”

The use of iBooks can improve students' understanding.

Answer	Count	Percentage
Strongly Agree (SQ001)	3	14.29%
Agree (SQ002)	13	61.90%
Neither agree nor disagree (SQ003)	5	23.81%
Disagree (SQ004)	0	0.00%
Strongly Disagree (SQ005)	0	0.00%
Comments <input type="button" value="Browse"/>	9	42.86%
No answer	0	0.00%



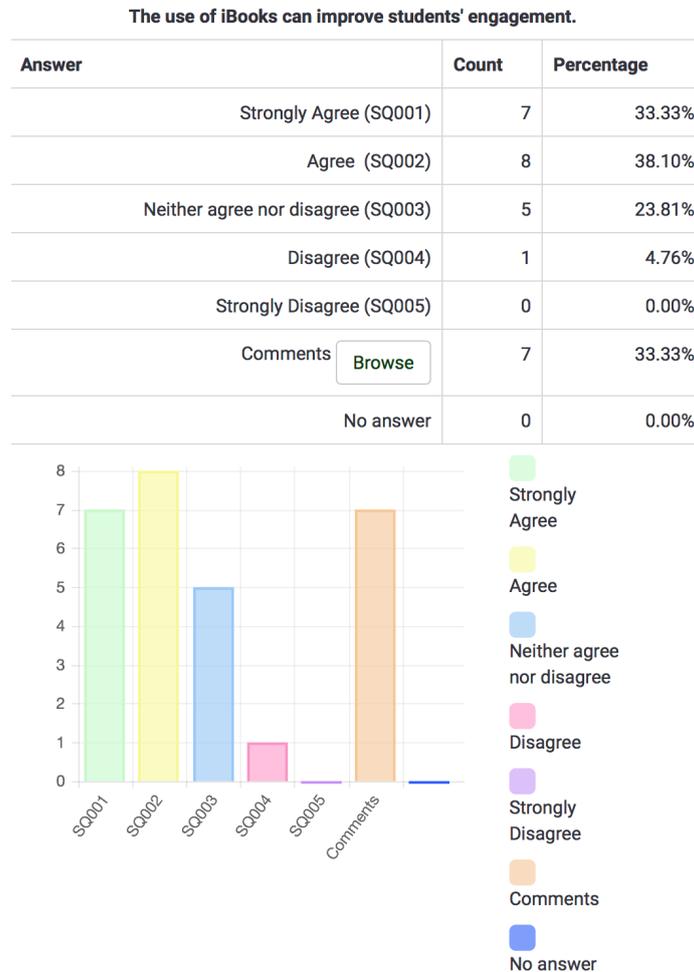
In the following the participants were asked if they agree or disagree with the statement that “*The use of iBooks improve students’ understanding.*” and the majority of the prospective teachers (61,90%) agreed while 14,29% strongly agreed.

“iBooks may foster students' motivation which is the basis for every successful learning process. They offer a variety of designs and tools that can be used to illustrate contents.”

“because it addresses the whole range of learner types.”

On the other side 23,81% of the participants did not agree or disagree. One of the participants took the view that not especially the iBook as a tool improve students' understanding but rather the fact that students get to read.

“As any other reading tool.”



In order to be able to compare the opinions of the participants the following question focused on students' engagement, stating that “*The use of iBooks can improve students' engagement.*”. While most of the future teachers (61,90%) agreed that iBooks can improve students' understanding, the result of this question about their engagement was not as clear as the results of the question before. A significant part of the participants (33,33%) strongly agreed that the use of iBooks can improve students' engagement while 38,10% also agreed building a predominant positive view of the future teachers.

“Students may be motivated to develop an iBook themselves and they are more likely to engage in such a project than in creating traditional products.”

“They can create their own iBook/eBook if the technical equipment is available. That might give them the freedom to choose a subject that they are interested in, that will contribute to get their attention and get them interested in another way.”

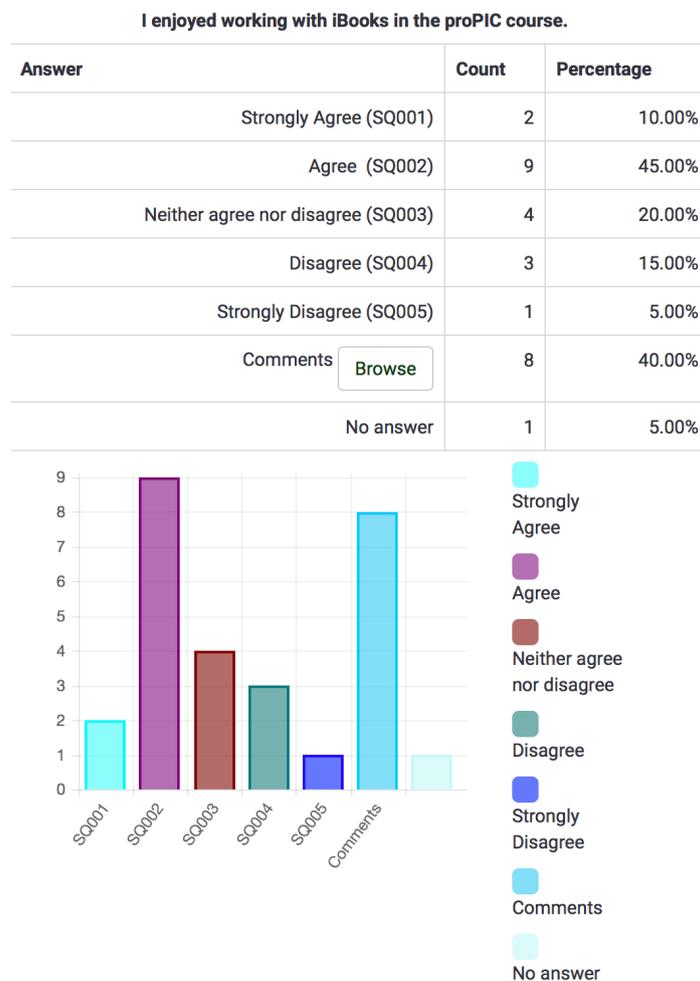
“Kids love screens and Apple things”

“I can see that an ebookreader or a tablet can be more fun then [sic] a book.”

On the other side 23,81% of the participants remained undecided while 4,76% disagreed with the statement emphasizing the fact that iBooks is only compatible with an Apple device. This shows again the importance of offering every student access to Apple devices in order to be able to work with iBooks.

“If a student doesn't use apple products ibooks actually exclude that student.”

The opinion of the students towards the use of iBooks for their own teaching



The following section of the survey focused on the use of iBooks for the own teaching of the prospective teachers. In order to integrate iBooks in their classroom it is important that the future teachers themselves like to work with them and can see possible benefits of their use.

Therefore, it was important to investigate whether they enjoyed working with iBooks in the proPIC project. The majority of the participants (45%) agreed while 10% strongly agreed, 15% disagreed and 5% strongly disagreed. This shows that the opinion on the specific iBooks which were integrated in the proPIC course caused mixed opinions.

The comments show that the participants who did not have an Apple device had difficulties to get access to the interactive tutorials. It is important that in classrooms where students get to work with iBooks Apple devices are provided in order to give every students access to the books.

“iBooks are only accessible via apple software run computers. This was a great nuisance as I don't own one, it took a long time until I had access and I was also not familiar with the usage of this software.”

“hard if you do not have an access to apple products.”

“would just wish that we could get better possibilities to be able to get access to the iBooks as there have been technical [sic] issues.”

Students can only work with PDF formats of the iBooks if they do not have an Apple device. Consequently, the interactivity of the original iBooks gets lost in the PDF format.

“It is a pain in the neck to always have to use apple products in order to use them. a PDF would have been just as good.”

“Not possessing of an Apple device in the beginning (we later found out about a library where they lend iPads) meant being unable to do at least half of the activities included in the interactive tutorials during the course.”

The next question was an open question asking the participants “*which features of their favorite iBook they would consider as most helpful*”. Most of the prospective teachers underlined that they consider the multimedia integration within the iBooks as very helpful. Integrated video, sound files, pictures and other medial tools helped them while working with the iBooks.

“A mixture of descriptive text and another explaining video to the same topic, as in innovative digital tools and methods.”

“The different media and methodology. Thus it a was really diverse way of working, watching a video, then reading a text and afterwards filling in a mind map.”

“I liked the design and the different ways to link videos. Also the combinations of texts, videos, pictures or audio recordings.”

“The integration of videos and audio files as I am a learner who learns very good when the material is supported by audio examples.”

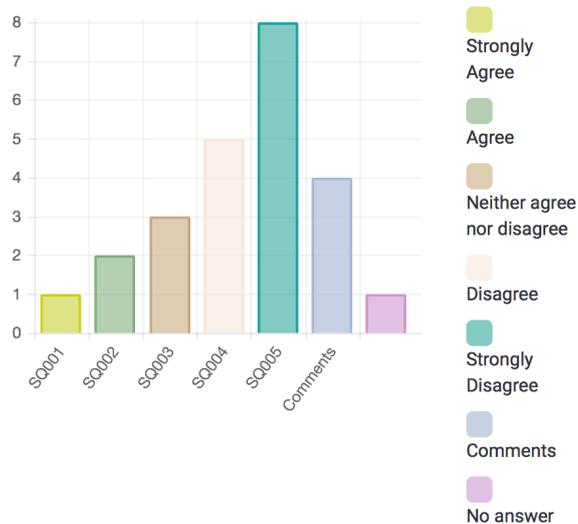
“The combination of text and short explanatory videos was very helpful.”

“In general the audio version of each text which make iBooks suitable for different needs of kids.”

“Diagramms and flowcharts to take note from. sum the topic up.”

In my teacher training, I got in touch with iBooks next to the proPIC course.

Answer	Count	Percentage
Strongly Agree (SQ001)	1	5.00%
Agree (SQ002)	2	10.00%
Neither agree nor disagree (SQ003)	3	15.00%
Disagree (SQ004)	5	25.00%
Strongly Disagree (SQ005)	8	40.00%
Comments <input type="button" value="Browse"/>	4	20.00%
No answer	1	5.00%



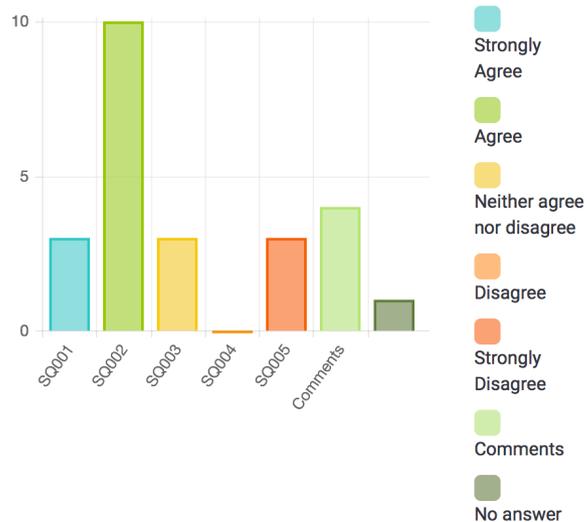
This question examined whether prospective teachers at the five different partner universities got in touch with iBooks next to the proPIC course. The result of this question is very interesting and diverse. Even though most of the future teachers (40% strongly disagreed and 25% disagree) some of the participants used iBooks also in other university courses.

“During an internship I was able to create iBooks with students.”

“Just before I joined the proPIC project we worked with creating our own iBook, so a clear yes.”

I would appreciate using iBooks in other university courses, too.

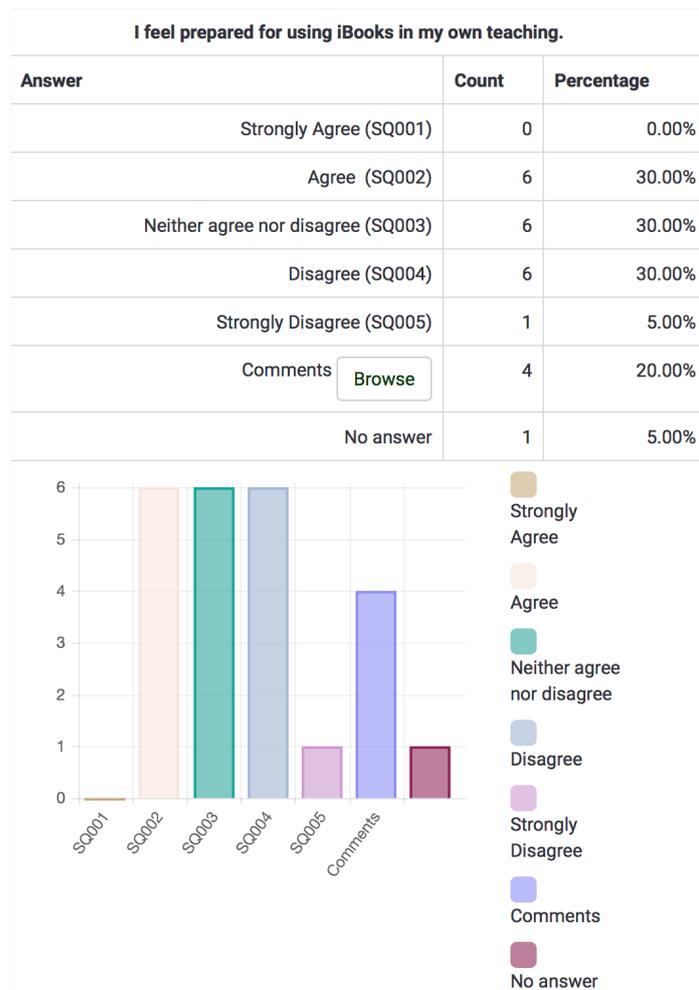
Answer	Count	Percentage
Strongly Agree (SQ001)	3	15.00%
Agree (SQ002)	10	50.00%
Neither agree nor disagree (SQ003)	3	15.00%
Disagree (SQ004)	0	0.00%
Strongly Disagree (SQ005)	3	15.00%
Comments <input type="button" value="Browse"/>	4	20.00%
No answer	1	5.00%



On the following Likert scale the participants had to consider whether they “*would appreciate using iBooks in other university courses, too.*”. 50% of the participants agreed while 15% of the prospective teachers strongly disagreed. Meaning that three out of 19 future teachers would not appreciate using iBooks in their teachers training.

“Ebooks, not just ibooks.”

“If they provided more Apple devices to borrow at my university...”



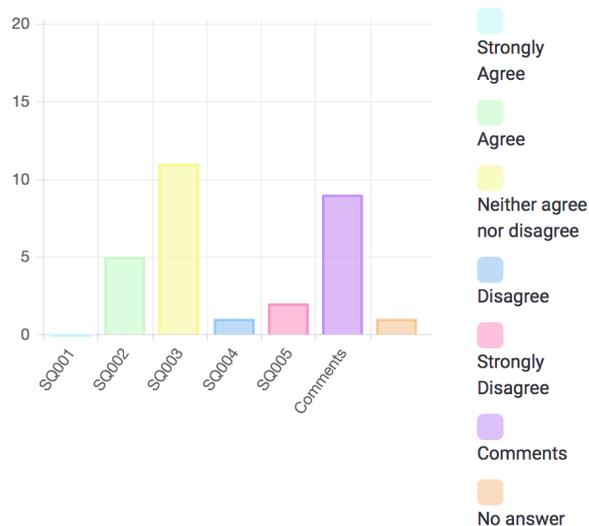
In order to be able to use iBooks in the classroom future teachers need to be prepared. The integration of technology in university courses is vitally important in order to foster the technical skills of prospective teachers. The proPIC course aimed to prepare the students to use iBooks for their own teaching amongst other things. The results of this Likert scale showed that the opinions on the issues are spread. 30% of the participants stated that they feel prepared for using iBooks in their own teaching while 30% could not decide whether to agree or disagree, 30% disagreed and 5% strongly disagreed, showing that some of the future teachers are not confident enough to use iBooks in their own lessons and that they need more support and help.

“Very complicated to generate by myself.”

“On one hand yes, because I really like it as a tool. On the other hand I dont know to be honest if I will 'take the time' that I need for creating different iBooks, but hope I will get colleagues [sic] who want to use iBooks that we can share them with each other and I also hope this will be the case with the other students within the propic project!”

I am going to use iBooks in my own teaching.

Answer	Count	Percentage
Strongly Agree (SQ001)	0	0.00%
Agree (SQ002)	5	25.00%
Neither agree nor disagree (SQ003)	11	55.00%
Disagree (SQ004)	1	5.00%
Strongly Disagree (SQ005)	2	10.00%
Comments <input type="button" value="Browse"/>	9	45.00%
No answer	1	5.00%



The next question in the survey was whether the prospective teachers who participated in the proPIC course are going to use in their own teaching. The significant result is that 55% of the participants are unsure if they should agree or disagree. In the comments one can see that the reason for the result is the accessibility of iBooks.

“I will not use formats that are only available to certain people using apple products. As a teacher I think it is important to teach about the benefits of using open source software.”

“I don't like the idea of an innovative tool that is only available for a minority that happen to have the money to invest in a more expensive computer.”

“If possible I could imagine using them in grade 3 or 4 but it also depends on the school.”

“Depends on access to iPads.”

“It depends on the technical equipment of my future school.”

Examining the following open question “*What are the possible challenges of using iBooks for your own teaching?*” it is noticeable that the future teachers have a critical point of view towards the use of iBooks in the classroom and are aware of the possible challenges which can come along while using iBooks for teaching.

“Time consuming to generate, financial support to provide iPads for everyone.”

“Getting the school to buy the books, or licenses for the books I want to use. “

“Not familiar with the software.”

“No apple device to access them.”

“If there are no iPads in school it is impossible to work with them.

“Time consuming and it is not always possible to provide ipads.”

“Prepare them and collect all the sources and videos.”

“Not having enough devices for everyone in the classroom, having to learn about the creation of iBooks

“Not every student may have access to an apple device.”

“The fact that not everyone has an apple device, including me.”

“It is the utmost expensive option imaginable. I do not think that parents will be very supportive in buying their kids iPads. As well I cannot imagine that schools are funded enough to buy them for every student.”

On the other side the prospective teachers are also aware of the advantages which iBooks can bring for the learning process of students

“Getting the students interest, good for binnendifferenzierung, different fields like reading, listening or speaking can be covered at the same time.”

“They are very interactive, combinations of sound, video, text, own speech production and also text production or usage of multiple choice is possible.”

“Including different media, motivation for the students working with new media, you can use iBooks for works where the students can decide about their time individually.”

“authentic language learning, collaboration, motivation, differentiation, fun, different elements: text, pictures, videos, working with new media...”

“Media based teaching which is supported in this way of learning becomes more and more important.”

“Motivating the students. Learn how to use digital tools.”

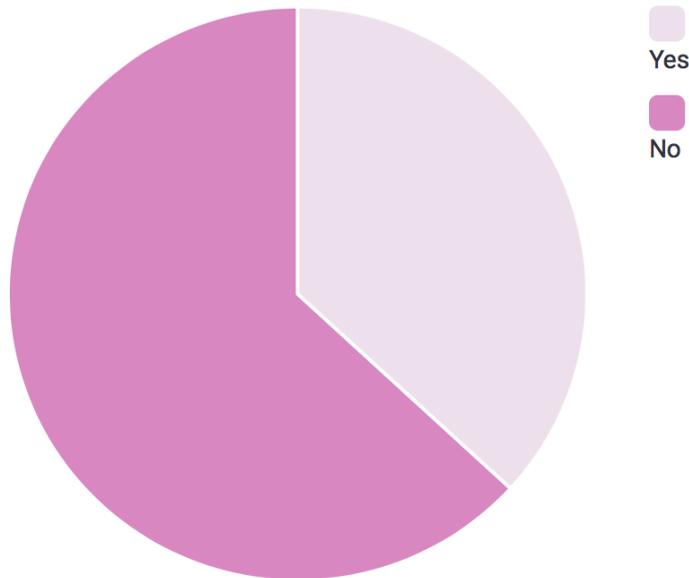
“It addresses all learner types, a high variety of possible activities.”

“iBooks may lead to an increase in students' motivation and therefore, they may lead to better learning outcomes.”

“The interactive features that engage [sic] students' attention.”

Do you know the difference between iBooks and iBooks Author?

Answer	Count	Percentage
Yes (Y)	7	36.84%
No (N)	12	63.16%
No answer	0	0.00%

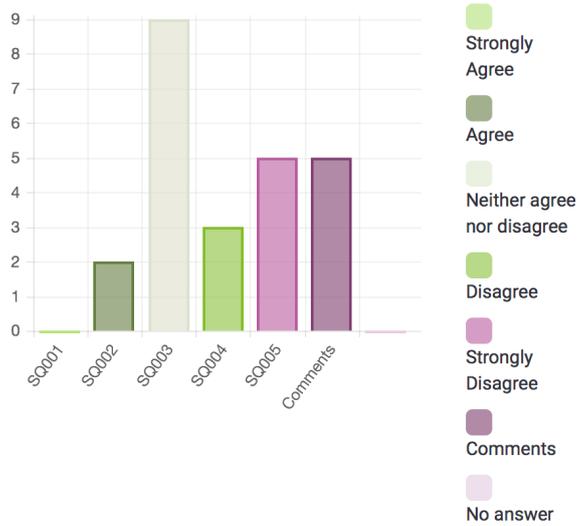


The attitude of the students towards the use of iBook Author for their own teaching

The special feature of iBooks for the use in education is that teachers can create their own materials and interactive books with the application iBooks Author. The closed question above shows that a significant part of the participants (63,16%) have indicated that they do not know the difference between iBooks and iBooks Author. Not knowing that they can create their own iBooks for their own teaching the participants are also not aware of the benefits which can come along with the use of iBooks Author.

I feel prepared for creating iBooks using the application iBooks Author for my own purposes.

Answer	Count	Percentage
Strongly Agree (SQ001)	0	0.00%
Agree (SQ002)	2	10.53%
Neither agree nor disagree (SQ003)	9	47.37%
Disagree (SQ004)	3	15.79%
Strongly Disagree (SQ005)	5	26.32%
Comments <input type="button" value="Browse"/>	5	26.32%
No answer	0	0.00%



The lack of knowledge in terms of creating an own iBook, prospective teachers are not sure if they feel prepared for creating an iBook using the application iBooks Author. While 47,37% of the participants neither agree nor disagree, a significant part (26,32%) strongly disagree stating that they have “never used it until now”, which shows that they need more training in the issue.

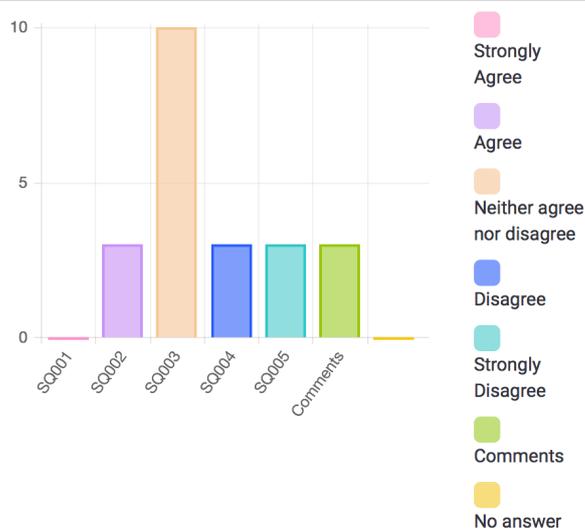
“I have acceptable knowledge in Ibooks author, but I prefer other ebook-tools.”

“I have only used it once, it took some time to get into.”

“If it's like bookcreator or similar, I can make it.”

I am going to use iBooks Author for my own teaching.

Answer	Count	Percentage
Strongly Agree (SQ001)	0	0.00%
Agree (SQ002)	3	15.79%
Neither agree nor disagree (SQ003)	10	52.63%
Disagree (SQ004)	3	15.79%
Strongly Disagree (SQ005)	3	15.79%
Comments <input type="button" value="Browse"/>	3	15.79%
No answer	0	0.00%



Given the fact that most of the prospective teachers feel insecure with the use of iBooks Author and do not feel prepared for the use of the application, the result of the question whether they are going to use iBooks Author for their own teaching or not is estimated. More than half of the participants (52,63%) neither agreed or disagreed which shows the insecurity of the prospective teachers.

“Still I would need someone to teach me using iBooks Author.”

“I’ll stick to bookcreator for a while.”

Examining the following open question “*What are the possible challenges/advantages of using iBooks Author for your own teaching?*” it is noticeable that the future teachers have not enough experience with the application.

“It might need time getting to know the program.”

“Time has to be invested, also an account is necessary to publish the books.”

“Haven’t used it yet.”

“Did not use it.”

Last but not least the future teacher where asked “*What possible topics/tasks/activities/materials could be included in an iBook that they would use for their own language teaching?*”.

“Podcasts, digital storytelling, autonomous research, vocab practice, youtube Videos and audio books.”

“Videos, links, interaction with other students.”

“Pronunciation or online debated topics.”

“Tandem working, videos and audios, fill in the gap - exercises (if it is possible to also include “corrections” of individual results.”

“Video and audio recordings, games, pictures.”

“Background information according to some topics and how they affect the language learning (e.g. politics).”

“Grammar tasks, teaching genre in the course of teaching writing, 'Landeskunde' and intercultural learning.”

5. Solutions

The results of the survey show that the prospective teachers who participated in the proPIC course have in general a positive attitude towards the use of iBooks in the classroom. Mostly they are aware of their benefits in the field of education and think that the use of iBooks can improve students' understanding and engagement. The reason for this could be their own experience in the proPIC course, since the majority of the prospective teachers enjoyed working with in the interactive books and stated that they would appreciate using iBooks in other university courses, too. Hence, through the results of the survey it is apparent that the use of new technologies in university courses is emerging but not an integral part of teachers training.

Consequently, future teachers do not feel prepared for the use of iBooks in their own teaching and therefore are insecure whether they would use them in future or not. Due to lack of training the future teachers are also insecure to use iBooks Author to create their own material, although they know which possibilities, tools and features iBooks can offer for language learning and teaching. Furthermore, the fact that iBooks are only compatible with Apple devices affected the learning process of the students. Not having a device on which the interactive features are performed, limited the students in their learning and perception of possible advantages of iBooks for their learning.

In conclusion one can say that the integration of iBooks in the proPIC course fostered Innovation and enhanced the professionalism of future teachers in terms of using new technologies. However, technology itself is not an integral part of teachers training. On account of this universities should consider the integration of innovation in their courses in order to provide future teachers the chance to gain more experience. Difficulties due to software compatibility occurred in the proPIC course and not every student had accesses to the interactive books, which shows the importance of the equipment provided for the students. In order to be able to use iBooks in the classroom, access should be provided to every student. Only with equated access to devices, students can learn without being limited.

6. Conclusion

Living in the new age where technology is an integral part of everyday life and new media an important tool, teaching is getting more and more towards the use of innovation in educational settings. The emerging changes in the global economy, due to development of new technologies, retails the evolution of new skills in our education system in order to prepare students for their future life. Therefore, the integration of the use of such technologies in teacher training is vitally important, in order to prepare prospective teachers for the use in their own classrooms. The proPIC course integrated as an example the interactive books in the syllabus, giving future teachers the opportunity to work with emerging technologies. Prospective teachers could figure out which features, tools and apps can be integrated in iBooks while learning the subject matter of the books. Getting to know iBooks as a tool for language learning and teaching, prospective teachers could experience the advantages and disadvantages of their use in the classroom which gave them the first-hand experience.

The results of the survey showed that the integration of this tool in the proPIC course caused in general a positive attitude towards the use of iBooks in the classroom. Future teachers who participated in this project are aware of the benefits iBooks entail in the field of education and think that the use of iBooks can improve students' understanding and engagement, caused by their own experience. This shows that in order to foster the professionalism of prospective teachers the integration of emerging technologies in university courses is inevitably. Even if difficulties occur while using new tools the effect of gaining new experience and developing a critical thinking pose an enrichment for the future teachers, which is the presupposition for the effective application of such technologies in language learning and teaching. Not only the integration of technologies in the classroom is essential, but also the motivation and competences of teachers to use iBooks in a meaningful way. The elation of future teachers to use iBooks for their own teaching paired with the know-how they need can lead to a positive effect on students learning process.

"iPads and interactive books created with iBooks Author can do great things, but the creativity and innovation of the teacher and the content is what makes them shine."

Pamela Johnson 2015

7. Appendix

Survey copy

Welcome to this survey on the use of iBooks

>>Your feedback matters<<

Thank you for taking the time to participate in this survey. The activity shouldn't take you longer than 10 to 15 minutes. Have fun!

Dear Participant,

my name is Birnur and I am a student at the University of Education in Karlsruhe. For my bachelor thesis, I am examining in which way the use of iBooks in university courses prepares and motivates future teachers to use iBooks and iBook Author for their own teaching. Since you participated in the proPIC course, I invite you to also take part in this research study by completing this survey.

Thank you for taking the time to assist me in my educational endeavors. The collected data will provide useful information for my study. If you require additional information or have any questions, please contact me.

Sincerely,

Birnur Avsar

 bimur.avsar@stud.ph-karlsruhe.de

There are 22 questions in this survey.

I read **eBooks** in private. *

Please choose **only one** of the following:

Yes

No

I read **iBooks** in private. *

Please choose **only one** of the following:

- Yes
- No

What do you like most about iBooks?

Please write your answer here:

iBooks are effective tools in the field of language education.

*

❶ Choose one of the following answers
Please choose **only one** of the following:

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Make a comment on your choice here:

I think that iBooks facilitate learning a second language.

*

❗ Choose one of the following answers
Please choose **only one** of the following:

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Make a comment on your choice here:

In which way could the use of iBooks in school foster collaboration and authentic language learning?

Please write your answer here:

The use of iBooks can improve students' **understanding**.

*

❶ Choose one of the following answers
Please choose **only one** of the following:

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Make a comment on your choice here:

The use of iBooks can improve students' **engagement**.

*

❶ Choose one of the following answers
Please choose **only one** of the following:

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Make a comment on your choice here:

I enjoyed working with iBooks in the proPIC course.

*

❗ Choose one of the following answers
Please choose **only one** of the following:

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Make a comment on your choice here:

Please rate how much you liked working with the specific iBooks in the proPIC seminar.

*

Please choose the appropriate response for each item:

	6 - I liked	5	4	3	2	1 - I did not like	No answer
Continuing Professional Development (CPD)	<input type="radio"/>	<input type="radio"/>					
Approaches to teaching and learning with technology	<input type="radio"/>	<input type="radio"/>					
ePortfolios	<input type="radio"/>	<input type="radio"/>					
Video Enhanced Observation	<input type="radio"/>	<input type="radio"/>					
Video Production	<input type="radio"/>	<input type="radio"/>					
Innovative digital tools and methods	<input type="radio"/>	<input type="radio"/>					
Working in the field of research	<input type="radio"/>	<input type="radio"/>					

Please select 'No answer' if you did not work with the iBook.

Which features of your favorite iBook did you consider as most helpful?

Please write your answer here:

In my teacher training, I got in touch with iBooks next to the proPIC course.

*

❗ Choose one of the following answers

Please choose **only one** of the following:

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Make a comment on your choice here:

I would appreciate using iBooks in other university courses, too.

*

❶ Choose one of the following answers
Please choose **only one** of the following:

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Make a comment on your choice here:

I feel prepared for **using** iBooks in my own teaching.

*

❶ Choose one of the following answers
Please choose **only one** of the following:

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Make a comment on your choice here:

I am going to use iBooks in my own teaching.

*

❶ Choose one of the following answers
Please choose **only one** of the following:

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Make a comment on your choice here:

What are the possible **challenges** of using iBooks for your own teaching?

Please write your answer here:

What are possible **advantages** of using iBooks in school for language learning?

Please write your answer here:

Do you know the difference between iBooks and *iBooks Author*? *

Please choose **only one** of the following:

- Yes
- No

I feel prepared for **creating** iBooks using the application *iBooks Author* for my own purposes.

*

❗ Choose one of the following answers
Please choose **only one** of the following:

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Make a comment on your choice here:

I am going to use *iBooks Author* for my own teaching.

*

❶ Choose one of the following answers
Please choose **only one** of the following:

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Make a comment on your choice here:

What are the possible challenges/advantages of using *iBooks Author* for your own teaching?

What possible topics/tasks/activities/materials could be included in an iBook that you would use for your own language teaching?

Please write your answer here:

Thank you for taking the time to complete this survey. I truly value the information you have provided.

If you have any comments on the survey, please contact me.

Many thanks,

Birnur Avsar

 bimur.avsar@stud.ph-karlsruhe.de

Submit your survey.

Thank you for completing this survey.

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9. Statement of Authorship

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Date:

Name:
