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# Finding our way in the world of interactive eBook making

## An approach to Design-Based Research and experiential learning.

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This article describes the process the teacher students carried out and the results they achieved when they took part in JAMK's Future Factory activities. At the School of Professional Teacher Education such a possibility is offered in the PEDDA Lab environment in where students can participate in structured and supported pedagogical development projects that follow the principles of Design-Based Research.

## Introduction

Our journey started by enrolling ourselves in the course Pedagogical Lab (PEDDA Lab) offered by the School of Professional Teacher Education at JAMK. Participants of this course are able to develop pedagogical development tasks based on current needs at the department. These tasks can be related to several pedagogical development areas, such as expanding the available choices of studies and/or participating in research, development and innovation (R&D&I) activities. In our course we could choose between designing an interactive eBook or designing an online course. Both tasks were structured and supported, following the principles of Design-Based Research (Wang and Hannafin, 2005) via experimental learning.

Our group was formed out of four students that choose to look at the pedagogical development of an interactive eBook. When the group was created, we needed to make a number of decisions. First, we discussed and decided on a topic for our eBook and defined the relevance of the project for us. Then we created our specific learning aims and considered the target group for the eBook. Finally, we planned how to implement our project, such as, the time schedule and the division of the tasks and made a dissemination plan.

The eBook project activities were grounded on the design-based research (DBR), and experiential learning methodology (McKenney and Reeves, 2012; Kolb, 2014). Since DBR is situate, productive, measurable, iterative, and realistic in nature, it allows the research processes to be conducted in the real world and to solve real problems (McKenney and Reeves, 2012; Shattuck, J., Anderson, T. 2013). This is achieved in four main stages that include, developing of theory, identification, interventions (solutions), reinventing the design principles, and reflection and implementation of solutions (Koskinen and Seppälä, 2012).

# Our project and its relevance

After some brainstorming on possible subjects we decided to make a guidebook for educated immigrants to support their journey on seeking a career or study possibilities in Finland. Finland has been positioned as an ideal place to live, study and build a career. However, for many immigrants that dream runs into a brick wall when they try to find a job. The unemployment rate among foreign-language speaking groups in Helsinki is double that of the local population. At the same time, employers have trouble finding enough qualified job applicants (Susiluoto and Kyntäjä, 2019).

One part of our project was to interview immigrants from various backgrounds to discover what the main bottlenecks for them are when they have looked for a job or a study place. Based on our interview data three main points emerged. Firstly, the most important challenge was the language, and how to find places to study Finnish language. Secondly, challenges were faced on finding out how to get their foreign degrees recognised, and thirdly, it was difficult for them to find out what kinds of possibilities there are to get a study place in further education organisations. Based on these comments, we wanted to offer some directions in the search for a job or a study place in Finland, and, thus, created an eBook. Our eBook is not designed to offer all the possible information that is available, rather we tried to give a good start on an individual's journey of finding a way in Finnish working life.

## Methods

At the beginning of the project we all interviewed immigrants in our local environments who had completed formal education in their home country but have had challenges in finding work in Finland. We used the results of these interviews and our own experiences as background knowledge to create the interactive eBook with different chapters (Language learning, Further education, Working in Finland, Recognition of overseas qualifications).

To create the actual eBook, we used the program Kotobee for which the School of Professional Teacher Education has a licence for. The platform offers a possibility to create and develop interactive eBooks. The programme was new for all us so we started to explore it in order to find out what kinds of possibilities Kotobee program could offer us. At the same time, we burrowed deeper in our dedicated topics and book chapters.

Since all of us lived and worked in different parts of Finland, we did not have possibilities to meet face to face, rather we had regular online meetings through Zoom video conferencing platform that is used at JAMK. In addition to ZOOM, we used the Teams application, which also is a facility offered by JAMK, to share our files and ideas on the project. We shared the texts we had written in Teams, giving us the possibility to review each other's work and comment on them directly. We discussed the process and the progress of our eBook project in the Zoom environment. Some of these online meetings were conducted together with our supervising teacher educator, who helped us with the program and supported with the process. Eventually, when all different chapters were written and combined into one eBook, we started to edit it. We

considered issues such as layout, cover page, a title, chapter orders and interactive elements. The whole process of designing and creating the guidebook as an interactive eBook, was realised within three months.

## Challenges and success stories

Since the whole project was conducted online, and we never met face to face, it was a challenge to decide a joint topic for the eBook and share the workload evenly between us. Working in a group where the participants were far-apart from each other was demanding, in particular at the beginning of the project, but with the right communication tools and practices, we managed it. We shared the tasks for each week, and we felt that we all participated equally.

Working with a completely new programme, without any prior practical knowledge, was a learning process for all of us. The program was rather big and complicated, thus, working on an older computer was not too user friendly in terms of saving and reopening files. Another big challenge was to make the book interactive. We created a number of chapters which mainly offered information in written format and we realised that it was hard to think and add interactive elements on it. However, we added some pictures, videos and weblinks, to offer readers some interactive elements. We also found out that links can easily break or become outdated when websites or information change. We would have wanted to make some of the flow diagrams interactive, but unfortunately, we could not find the right tools in this program to achieve that. The chapter about language learning succeeded the best in integrating interactive elements, since it includes quizzes, audio files to listen to the text, songs and other sounds that all help the reader to learn the language. In general the program is better suited to create interactive elements for teaching knowledge than for giving general information about a subject.

Nevertheless, it is important to state that, Kotobee provided us with a platform where we could build and develop our eBook design. Design based research is characterised by myriad of complexities, and limitations from the fact that it is operated in actual practice (Wang and Hannafin, 2005; McKenney and Reeves, 2012). Hence, our project was not an exemption.

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