Using Vikipeedia for educational purposes in Estonia: The students' and teachers' perspective

Stage II proposal

1. Context of the research

Over the past two decades, there has been an increasing amount of literature on Wikipedia.[1] Several studies have investigated the use of Wikipedia for educational purposes both at school and at university. The focus has been on information skills (e.g. Calhoun, 2014), critical evaluation skills (e.g. Harouni, 2009), writing skills (e.g. Vettel et al., 2019), research skills (e.g. Miller, 2014), digital skills (e.g. Brox, 2016) etc. Some studies deal with universal topics that are not related to cultural background or language (e.g. Reilly, 2011), while some have focused on using Wikipedia in more specific contexts (e.g. Petrucco & Ferranti, 2020). Regardless of the specific topic, most studies have a strong pedagogical implication.

Although the use of Wikipedia for educational purposes has been extensively studied in different countries and languages, so far only little is known about the situation in Estonia. In the academic year of 2010/2011 Wikimedia Eesti questioned students and teachers from 15 general education schools (the project "Vikipeedia koolides"), but the results were not published. In 2019, Reinsalu and her colleagues analyzed in their research how to develop university students' writing skills through Vikipeedia based writing tasks. This was followed by a case study on using Vikipeedia-based writing tasks in a written communication course (Reinsalu, under review). The lack of research studies on the Estonian context indicates that we know very little about the use of Vikipeedia for educational purposes. Considering that schools determine the attitude towards Vikipeedia and willingness to contribute to its development, it is important to study how Vikipeedia is used in general education schools.

There is great potential in implementing Vikipeedia as a collaborative web environment for educational purposes in Estonia because Estonia tends to identify itself as an e-state (e-Estonia). Estonian schools got their first computers and internet connection already two decades ago. Students gain their first experience using the internet either in primary school (40.4%) or earlier (39%) (PISA, 2018). 2014 marks the year of the Digital Turn in Schools program, which led to the increasing use of various e-resources in teaching: e-learning environments, e-textbooks, e assignments and e-exams, regular e-learning days etc. From 2020, schools are able to provide general education using only e-materials. This means that the necessary technical conditions have been created to implement Vikipeedia for educational purposes.

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[1] List of academic studies about Wikipedia.
https://en.wikipedia.org/wiki/Wikipedia:List_of_academic_studies_about_Wikipedia

Additionally, over the last decade, Estonian schools have made an effort to follow the principles of new literacy. According to those principles, teaching reading and writing is a socio-cultural phenomenon (Lankshear & Knobel, 2011) that requires adaptation to societal change and offering a meaningful learning experience for students (Willinsky, 2017). New literacy is characterized by multimodality, use of authentic texts, dialogical feedback, diverse communication channels, collaborative writing and content sharing (Kallionpää, 2014). As Vikipeedia article corresponds well to these features, it provides an opportunity to develop a variety of Vikipeedia-based reading and writing tasks and apply them in the teaching process.

2. Purpose of research

This research seeks to examine the use of Vikipeedia (Estonian language version) in Estonian general education schools for educational purposes both from the students' and teachers' perspective. The two main research questions are:

1. How do students use Vikipeedia for educational purposes both inside and outside the classroom?
2. How have teachers used Vikipeedia's potential for educational purposes?

We assume that students use Vikipeedia for educational purposes outside the classroom often but inside the classroom (e.g. Estonian language classes) the usage depends on the teachers' attitude towards Vikipeedia and their digital skills. Taking into account that ⅓ of Estonian teachers are over 55 years, it can be assumed that some of them do not use Vikipeedia-based writing tasks because they fear the technical side of Wikipedia.

3. Impact

The research has a dual effect for educational settings.

1. The research will have a direct impact on the local Wikimedia community in Estonia supporting their educational activities. Based on the research results, study materials can be developed to support the use of Wikipedia in the teaching process. It could further impact other local Wikimedia communities indirectly by applying insights to a different context.
2. The research gives a strong foundation to carry on the further studies both in general education schools and universities, e.g. the case studies on using Wikipedia-based genre writing tasks.

4. Research plan

The research consists of two studies.
The first study will explore students' experiences of using Wikipedia in the

educational context. We will compile a multi-part questionnaire to examine quantitatively the use of Wikipedia from the perspective of students in grades 9 and 12. At least 10 schools and 400 students, representing different regions, are included in the study.

The sample is based on convenience sampling taking into account the regional distribution. This approach is well reasoned because the previous studies have shown that only a small number of students complete the questionnaire if there is no previous contact with the sampled schools. Those contacts also facilitate the second part of the study (focus group interviews).

The questionnaire is divided into several parts. It is important to find out students' perception towards Vikipeedia (e.g. *Vikipeedia articles I have read were accurate/useful/…*) and the use of Vikipeedia for educational purposes (e.g. *I have used Vikipeedia as a source of the literature review; I have written a Vikipeedia article as a part of the writing assignment*)*.* The exact structure of the questionnaire will become clear after reviewing the literature.

As required, we have been communicating with a Nigerian project team by email trying to find opportunities for collaboration. Although the research is still at an early stage, it still seems that the starting point for the research is different: while the Nigerian team is focused on why educational institutions (universities) do not use Wikipedia and how the situation can be remedied, we will focus on how the students on teachers from Estonian general education schools already use Vikipeedia for educational purposes. Differences in purpose and target group necessitate a (partly) different questionnaire.

The second study will highlight more clearly Vikipeedia's educational potential from the teacher's perspective. We will conduct at least 10 focus group interviews with 50-60 teachers whose students completed the questionnaire. The sample includes the different subject teachers who have used or whose students have used Wikipedia for educational purposes. The data collected by semi-structured interviews will be analyzed in the framework of qualitative content analysis with NVivo software.

A combination of quantitative and qualitative approaches allows to broaden understanding of how Wikipedia is incorporated in the learning and teaching process at general education schools.

As background information for **both studies** we will analyze the data collected by Wikimedia Eesti in the academic year 2010/2011. The sample of the study consisted of 9th and 12th graders from 15 general education schools. Although the previous questionnaire was different in structure and type, it still provides valuable comparative data and may reveal significant similarities and differences from over a decade ago.

5. Time frame

The research process will start with preliminary work in August and continues with the pilot survey/interview in September. Both main studies will be carried out in October and November. This is followed by data analysis and writing, editing and publishing two articles. Research is supported by regular project meetings and two writing boot camps.

August 2022 ● Reviewing the literature ● Preparing the pilot survey/interview ● Preparing the documents for Research Ethics Committee ● 2-day writing boot camp	**January 2023** ● Analysing data ● 3-day writing boot camp
September 2022 ● Assessment of Research Ethics Committee ● Conducting the survey/interview	**February 2023** ● Writing the articles
October 2022 ● Contacting with the schools ● Completing the questionnaire at schools ● Conducting the focus group interviews at schools	**March 2023** ● Writing the articles
November 2022 ● Completing the questionnaire at schools ● Conducting the focus group interviews at schools	**April 2023** ● Translating-editing the articles (as necessary)
December 2022 ● Analysing data	**May 2023** ● Submitting the articles for publishing them in the open access journals

The writing process is relatively long but it is difficult to shorten it because all project team members carry out project tasks as an additional task to their main job.
Due to the long publication process (reviewing may take 3 months, publishing 6 months), it cannot be expected that the articles will be published by the end of May. However, we guarantee that the articles will be submitted for publishing in an open access scientific journal by May 2023.

6. Budget

The budget consists mainly of additional payments for five researchers (Andrus Org, Ann Siiman, Marvi Remmik, Riina Reinsalu, Maigi Vija) who are equally involved in the research for 10 months. Two bachelor's students (Egeli Lõbus, Marilin Lõhmus) who will assist in collecting and analyzing the data will receive a stipend for 6 months.

Project coordinator (Riina Reinsalu) who is part of the research team will receive additional payment for 10 months.

The project team also includes a methodological consultant (Piia Taremaa, University of Tartu) and Vikipeedia's consultant (Ivo Kruusamägi, Wikimedia Eesti) who is paid a single additional payment.

The budget includes article processing charges for publishing two articles in the international peer-reviewed open access journals. It may happen that we will opt for some other journals which have lower charges or no charges. If it is possible to reduce the publishing costs, the remainder will be used for disseminating the results at the educational conference.

Other costs are related to transport (surveys and interviews at schools), writing boot camps, translating and copy-editing.

The institutional overhead is calculated on the basis of other costs.

7. Plans for dissemination

As a result of the research, two research articles (written in English) will be published in the international peer-reviewed open access journals: in Classroom Discourse, Language & Education or a similar journal.

Some of the collected data will be used in the bachelor's thesis (University of Tartu) by the students who are involved in the project.

The local academic community and other interested parties will be introduced to the research results in the form of presentations and short articles in Estonian.

8. References

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