

CALL Solutions that Support Multilingualism: Application to the “Nano” Languages in the West-Nordic Region

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Abstract

This article describes innovative CALL solutions that support multilingualism and “nano” languages in the West-Nordic Region. The non-language specific platforms are developed at the Vigdís Finnbogadóttir Institute at the University of Iceland and include open curated language courses for newcomers, www.icelandiconline.com, www.faroeseonline.fo and tools that enhance oral fluency and communicative skills in Danish as a second and third language in the West-Nordic region. The tools include: www.talboblen.hi.is, that focuses on oral language skills, www.talerum.is, an interactive game based program that promotes interaction, and www.frasar.net, a resource that teaches the pragmatics of phrases.

Keywords: CALL, Language Education, Linguistic Diversity, Second Language Acquisition.

Útdráttur

Í greininni er fjallað um nýstárleg tölvustudd námsgögn, sem er ætlað að stuðla að fjöltyngi og vexti og viðgangi tungumála í örsímum málsamfélögum á Vestur-Norðurlöndum, þ.e. í Færeyjum, Grænlandi og á Íslandi. Námsgögnin hafa verið þróuð af starfsmönnum Stofnunar Vigdísar Finnbogadóttur við Háskóla Íslands, en sú þekking, sem hefur skapast, getur gagnast hvaða tungumáli sem er. Annars vegar er um að ræða opin vefnámskeið í íslensku - www.icelandiconline.com - og færeysku - www.faroese.fo - og hins vegar þrjú máltæki, sem eru hönnuð með tilliti til kennslu dönsku sem erlends máls, og er ætlað að stuðla að tjáskiptahæfni nemenda, einkum hvað varðar talmál. Máltækin eru www.talboblen.hi.is, þar sem megináhersla er lögð á talmálsþjálfun, gagnvirki tölvuleikurinn www.talerum.is, sem reynir á notkun dönsku í ólíkum málaðstæðum, og www.frasar.is, sem kennir orðasambönd í dönsku og íslensku.

1. Introduction

The linguistic communities of the West-Nordic Region are characterized by their diversity. The region includes four countries: The Faroe Islands, Iceland, and Greenland and Norway. All are part of The Nordic Countries or “Norden”, which include Denmark, Sweden, Finland, Norway and Iceland as well as the autonomous territories of the Faroe Islands, Greenland and Åland, plus the Saami regions. A total of over 27 million people live in the Nordic countries today (Hauksdóttir, Lund & Börestam 2016: 93). The languages spoken in this area belong to three different language families:

1. Germanic languages include Danish, Faroese, Icelandic, Norwegian (*bokmål* and *nynorsk*) and Swedish,
2. Finnish and Saami are Finno-Ugric languages,
3. Greenlandic is classified as an Eskimo-Aleut language.

The Nordic region also comprises multilingual communities, where some 200 non-Nordic languages are spoken (Declaration on a Nordic Language Policy 2007:11). In this article we focus on efforts to support the local languages spoken in Iceland, the Faroe Islands and Greenland, and those who learn them as second languages

and efforts use to support multilingualism in the these changing linguistic communities whose speakers must increasingly seek information, education and communication with the outside world in languages that are not their first language; in most cases Danish and/or English. These speech communities have in common that the local languages have very few speakers. Greenlandic is spoken by approximately 55.000 speakers, Faroese has about 75.000 speakers and Icelandic is spoken by around 320.000 speakers (Norden i skolan).

The three languages which can be described as “nano” languages are the majority and official languages of the respective country and used in education and governance. Official efforts are being mounted to sustain the languages as first languages that cover all domains of language and at the same time support newcomers in these speech communities to learn the local language quickly and with no cost. Supporting sustainability is important to prevent language attrition and possibly language loss (Fishman 1996, Haugen 1972).

This article describes five Computer Assisted Language Learning (CALL) projects developed at the Vigdís Finnbogadóttir Institute of Foreign Languages at the University of Iceland. Two of the projects are aimed at newcomers learning the local languages of Iceland and the Faroe Islands, while three projects support Danish as a second or third language instruction in the West Nordic region. All the systems can be used to teach other

languages.

2. Background

Greenland has two official languages, Greenlandic and Danish while in the Faroe Islands and Iceland, Faroese and Icelandic are the sole official languages. Faroese, Icelandic and Greenlandic have for centuries been in intense contact with Danish. Politically, the Faroe Islands and Greenland are part of the Danish Monarchy while Iceland became an independent republic in 1944. Danish influence has thus been robust in all three communities although this is seen as decreasing. Today, English occupies an important and growing role in the linguistic landscape of all three speech communities. In all three countries, English has an official status as a foreign language. Danish is considered a foreign language in the Faroe Islands and Iceland although the presence of Danish is more evident in the former. Greenlandic and Faroese have several recognized geographical varieties while in Iceland variation is minimal.

The three countries are highly dependent on foreign relations. Proficiency in foreign languages is therefore vital. Language skills are the key to all communication with the outside world and a prerequisite for study abroad and more recently for study at local universities where a majority of textbooks are written in foreign languages, either in Danish (Hauksdóttir 2012b) or in English (Arnbjörnsdóttir & Ingvarsdóttir, 2018).

Danish is a mandatory foreign language subject at the primary school level in the Faroe Islands, Greenland and Iceland, however the actual role of Danish in these countries varies greatly. Due to their links with Denmark, Danish plays a key role in Faroese and Greenlandic society, while it is seldom used in everyday life in Iceland. Danish is the first foreign language taught in Greenland and on the Faroe Islands, but as a second foreign language after English in Iceland. While Danish is taught as a foreign language in secondary schools in the three countries, the volume and goal of instruction varies. The stated main purpose of Danish instruction in curriculum guidelines is to enable learners to participate in the Nordic linguistic and cultural community that encompasses more than 27 million speakers of related languages who share a common cultural heritage (Declaration on a Nordic Language Policy 2007:12). Teaching English is a priority in the Nordic school system, both at the primary and secondary school level. Increasingly Nordic universities are offering programs for local students where English is a Medium of Instruction and most textbooks at university level are in English. The same is true for continuing education and professional development. Without English it is difficult to obtain advanced education in the three countries nor in the Nordic countries in general (Arnbjörnsdóttir & Ingvarsdóttir, 2018) The need for proficient users of foreign languages is seen as significant for individuals and for the possibilities of these countries to make their voices heard in an international context.

The global spread of English through media and popular culture has found its way to the West-Nordic region.

Additionally, mobility related to educational and work opportunities has increased the use of English as a Lingua Franca in many areas where previously Danish served the same purpose. The changing yet important role of Danish and English in these countries has put pressure on the local languages. For language communities with few speakers it is important to enhance instructional material in the local language for newcomers, and to support students who must pursue their education in a language other than their first and the one they used in primary school.

3. The CALL Projects

One of the main challenges for linguistic communities with few speakers is the cost of developing adequate instructional materials that meet modern standards. Publishing costs are high and unsustainable in a very small market such as in the West Nordic region. In many ways teaching languages through computers or mobile devices alleviates the need for printed materials. Computer assisted language learning can also serve to motivate a new generation of digital natives or learners who have grown up with computers and the internet.

Web based language teaching offers excellent solutions for small and less commonly taught languages. The *Icelandic Online* platform and pedagogy are based on the notion that adults who wish to learn languages, should be able to do so at their own pace and on their own time. They also benefit from material that has been curated for them especially, to save them the time and effort to find the materials for themselves on the internet. The development of the three tools for supporting Danish described in this article was guided by the same principles. Motivation serves as key as the tools are game-based and use speech recognition to enable individuals to work on their own language development at their own pace. Because the tools cater to the individual, they can be used across linguistic and geographical boundaries where Danish serves different roles and extramural exposure varies (Hauksdóttir, 2004).

3.1 Teaching Icelandic and Faroese Online

In order to support newcomers residing, working and studying in Iceland and the Faroe Islands, the Vigdís Finnbogadóttir Institute has supported the development of www.icelandiconline.com and www.faroese.fo. Both are based on the same technology and pedagogy for teaching the two different languages.

Icelandic Online.com has had over 270.000 visitors from around the world with over 70.000 active users. About 25% of users have IP numbers in Iceland. The six free and open courses are structured, curated and based on a specific pedagogy. A non-language specific course editor can choose from over forty preprogrammed templates that allow course developers to construct courses for different purposes and target groups without the involvement of a programmer. The courses have an in-built tracking system that monitors students' progression through the system. The courses are offered on a multiplatform system that includes smartphones and tablets.

Course content is based on a specific pedagogy that allows the learner to develop accuracy and fluency gradually. This

is a skill-based course with emphasis on lexical, grammatical and pragmatic skills.

www.Icelandic Online.com includes 6 courses. IOL 1 was launched in 2004, IOL 2 in 2005, IOL PLUS Tutor in 2006 blended, IOL 3 and 4 and IOL survival course for newcomers in 2010 and IOL 5 in 2012.

The pedagogy used in *Icelandic Online* is based on relevant second language theories (Chapelle, 2001). The basic premise is that adults learn language differently than children and that they benefit from instruction, need accuracy practice, have experience learning foreign languages, have diverse learning styles, and that are motivated by interesting and relevant content to stay on the course.

Computer Assisted Languages Learning (CALL) is often said to be good for teaching accuracy, but not necessarily fluency. This means that using computers can help learners learn and understand target like language but is less efficient in teaching speaking and writing. CALL is therefore important for teaching morphologically complex languages (Icelandic, Faroese and Greenlandic) especially to adults. Complex morphology poses certain problems for adults who are beyond the optimal age for language development. In the case of Icelandic, nouns and adjectives have many different forms and agree in gender, number and case that are marked by different surface forms. The challenge for CALL is to present the necessary morphology up front in online beginner courses and still retain learners (Arnbjörnsdóttir, 2004).

Before programming a course, the development process begins with the exact goal of the specific target group and language and the ways in which these goals can be met. The interactive pedagogy is adapted to each language proficiency level. Survival courses focus on pragmatics based on the reality in which immigrants in Iceland and the Faroes find themselves; advanced beginner courses have very highly structured and scaffolded materials with glossaries; IOL 3 and 4 have longer texts - written and oral based on every-day life in Iceland. Scaffolding is gradually removed and more emphasis is placed on authentic texts including expository texts, IOL 5 focuses on Icelandic literature.

The European Benchmarks determine proficiency levels: IOL Survival (A1), IOL 1 and 2 A1 - A2) and IOL 3 and 4 (B1 - B2), while IOL 5 is at the C1 level (CEFR).

Icelandic Online's technology and pedagogy are thoroughly tested and has received very positive feedback from users and teachers. IOL is currently offered in three different modes of delivery: Open online courses, blended learning and distance learning with an online tutor. IOL is used by lecturers of Icelandic abroad, in secondary schools, by immigrants, and heritage speakers. Approximately 1/3 of those who enrolled are active learners and gender division is equal. Most of the learners are University students - and most of them come from 10 countries. But learners also come as far away as Burkina Faso and Malaysia. Of the current users, 69% are under the age of 31 years.

IOL has been tracking learners since 2006. The tracking system logs the position of the user as he or she navigates

through a course and then creates text files that are stored on a server. Findings indicate that when measured from the 15% juncture in the course rather than from the beginning, retention is high, and few students drop out. Results show clearly that the mode of delivery matters in retention – where the blended mode is most effective. The tracking system revealed signs of dropout bundles at the same specific junctures in all the courses. Upon comparing these junctures to the course content, preliminary indications are that a “storyline” in a course may be important in retaining learners and that assignment submission may both explain why students stay and leave (Friðriksdóttir & Arnbjörnsdóttir, 2015).

3.2 Teaching Danish through CALL in the West-Nordic Region

The lexicon of a language includes lexical phrases such as idioms, collocations and pragmatic phrases (Nattinger & DeCarrico, 1992; Wray, 2002). The website *www.frasar.net* is developed with Icelandic learners of Danish in mind. It contains 7560 idioms and pragmatic Danish phrases and their equivalent in Icelandic, when an equivalent exists. The tool offers different search options, including a whole or part of a phrase, its meaning as well as pragmatic information. Information on the meaning of the phrases can be obtained in both Icelandic and Danish, explaining variation in form and inflection. Idioms are sometimes problematic for foreign language learners, since their meaning typically is not transparent, or their usage can be specific and even at odds with more common use of the words in the target language. Due to their opacity, idioms can be difficult to understand, and due to their unpredictability, language learners are often unsure of their form. Sometimes the same idioms are used in many different languages for the same or similar meaning. This is especially true for related languages, such as Danish and Icelandic, but they often differ in unpredictable ways. Pragmatic phrases can also be relevant and necessary to certain situations of spoken and written language and are of great importance for target like use of language. For example, while greeting formally or informally, making requests or asking for assistance in a shop or in other everyday circumstances. Because of the similarity of the two languages, appropriate use of idioms and pragmatic phrases can be confusing for Icelandic students. In order to make *www.frasar.net* as practical as possible, the use of the phrases can be examined in context both with constructed examples and as they appear in a large corpus on which the tool is based (Hauksdóttir 2012a, 2014a).

Taleboblen is partly based on www.frasar.net, and contains over one thousand common phrases from a corpus of Danish everyday speech with the equivalent phrase in Greenlandic, Icelandic and Faroese. If there is no equivalent, an example and explanation of the Danish phrase is provided with an audio example. *Taleboblen* offers a variety of exercises for practicing oral proficiency and pragmatics in certain linguistic situations such as on the train or bus. Students listen to the pronunciation of Danish lexical phrases and they can record their own pronunciation of the words and phrases and then listen to their own voice. *Taleboblen* includes a tool for practicing intonation and rhythm in pronouncing phrases. Students receive immediate feedback on their pronunciation and their progress (Henrichsen & Hauksdóttir, 2015).

Talerum is a conversation-based game for learning Danish. It is aimed at students in the upper level of primary education in the West Nordic region. The game can also be used to teach Danish as a second language. The learner/user is an exchange student within the game and has a Danish host family that picks him up at the airport at the start of the game. The game includes a variety of tasks or challenges including going to the store to buy food or clothing. The students advance in the game only by using the language to perform the tasks they are assigned. There are many different scenarios in the game and the user's task is to solve puzzles gleaning information from conversations and thereby navigating through to the end of the game. Each scene has a theme e.g. Dagligstuen (e. Living room). Some scenes are independent, and it is not necessary to finish all the scenes in a specific order. But there are scenes that need to be finished before others. In the conversation scenarios, the user is prompted with a question. To answer the question correctly the user has to include one of many accepted keywords for that particular question in his answer. If a question is not correctly answered, the user is asked another question. When a user finally includes a correct keyword, the scene changes and the learner advances to the next set of questions. A speech recognition tool enables learners to hear what is being written in the game. The speech recognition tool is still in development, and *Talerum* will be Beta tested in schools in the West-Nordic region in early 2020.

4. Conclusion

The platforms upon which the projects described in this article are based are specifically developed for teaching language but are not language specific. They are not content management systems. They are also built on a specially developed pedagogy appropriate for online language learning. The technology and pedagogy can serve any language and any course. The positive reviews that the courses have received attest to this. Future projects include Icelandic Online for children in the beginning stages of second language literacy.

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