

# An Innovative World Language Centre: Challenges for the Use of Language Technology

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## Abstract

The Vigdís International Centre of Multilingualism and Intercultural Understanding at the University of Iceland will work under the auspices of UNESCO. The main objective of the Centre is to promote linguistic diversity and to raise awareness of the importance of multilingualism. The focus will be on research on translations, foreign language learning, language policy and language planning. The centre will also serve as a platform for promoting collaborative activities on languages and cultures, in particular, organizing exhibitions and other events aimed at both the academic community and the general public. The Centre will work in close collaboration with the national and international research community.

The Centre aims to create state-of-the-art infrastructure, using Language Technology resources in research and academic studies, in particular in translations and language learning (Computer-Assisted Language Learning). In addition, the centre will provide scholars with a means to conduct corpus-based research for synchronic investigations and for comparative studies. The Centre will also function as a repository for language data corpora. Facilities will be provided so that these corpora can be used by the research community on site and online. Computer technology resources will also be exploited in creating tools and exhibitions for the general audience.

**Keywords:** VIC language centre, Multilingualism, language diversity, translation, LT, CALL, corpora.

## 1. Introduction

The Vigdís International Centre of Multilingualism and Intercultural Understanding (VIC) will soon be established on the campus of the University of Iceland in Reykjavík. The activities of the Vigdís International Centre will be conducted in close cooperation with the Vigdís Finnbogadóttir Institute of Foreign Languages at the University of Iceland. The Centre aims to create a platform for a wide range of activities for researchers and teachers as well as to organize activities for the general public in order to create a wider awareness about linguistic diversity and to support multilingualism.

The increasing industrialization in the twentieth century with a small group of nations dominating the scene has had an adverse effect on the maintenance of social and cultural traditions of many communities. Studies have shown the fast rate in which languages are disappearing. According to one estimate (Krauss, 1992), 3.000 of today's 6.000 languages will disappear in this century, if no measures are taken.

A language is a reflection of the community that speaks it. Fishman (1996) describes succinctly what is lost when we lose a language: "Take it away from the culture, and you take away its greetings, its curses, its praises, its laws, its literature, its songs, its riddles, its proverbs, its cures, its wisdom, its prayers. In other words, everything."

Language death is not a new phenomenon. Languages have disappeared all through recorded history. Classic examples are Gothic, Sumerian and Hittite, to name but a few. But what makes this issue especially grievous in modern times is

the changing world scene. Factors such as internationalism and globalization, the modern "supra-regional" economy and the emergence of media of mass communication have intensified the situation where a small group of politically and economically dominant communities and their languages manifest too great a power on a large number of small communities.

The Vigdís International Centre is intended to counter this tendency by organizing activities to raise awareness of the importance of linguistic diversity and multilingualism. The aim is to create excellent facilities for research, and teaching of foreign languages, including comparative cultural, literary and translation studies, to raise awareness of the importance of preserving linguistic and cultural diversity, and to work towards the preservation of languages by maintaining and supporting language documentation. Another important aim of the Centre is to organize activities (e.g. exhibitions) to raise awareness among the general public to experience and learn more about languages of the world, about linguistic and cultural diversity. A special emphasis will be put on organizing events about languages and cultures (on site and online), using the latest technology, where the general public will be able to actively participate in such events, and where everyone may enjoy the possibility to practice his or her knowledge in a technologically advanced virtual and interactive experience centre.

Keeping in mind that language and literature have been and are the cornerstone of Icelandic culture and identity (Hálfðanarson, 2007, 2005; Hauksdóttir, 2013), as well as the prominent role that foreign language teaching holds in

the Icelandic education system where young people learn 3-4 foreign languages in primary and secondary school, namely English, one Nordic language, and German and/or French or Spanish (Hauksdóttir, 2009), it is but natural that a centre such as the VIC should be located in Iceland. In this respect, the importance of translation in Icelandic cultural life is not to be neglected, as the translation of foreign texts in Icelandic have ensured Icelanders' access to international ideas and theories, while translations of Icelandic literature to foreign languages have also provided a larger venue for these works. Finally, the project should also be regarded as the continuation of the pioneer work that Madame Vigdís Finnbogadóttir, former President of the Republic of Iceland, has conducted as the first and, to date, the only UNESCO Goodwill Ambassador for Languages.

### Main functions of the VLC

After many years of preparatory work, the Centre was certified in June 2013 as a UNESCO Category 2 Centre<sup>1</sup>. In its role as a Category 2 Centre, the Vigdís International Centre will be responsible for roles and functions pertaining to activities such as academic research on languages and cultures, foreign language teaching and learning, translation as well as disseminating knowledge on language and culture to a wider audience – both local population and international guests. The Agreement between the Government of Iceland and UNESCO stipulates the following objectives of the Centre:

- a) promote multilingualism in order to further understanding, communication and respect between nations and cultures;
- b) raise awareness of the key role of languages as a basic aspect of the human cultural heritage;
- c) contribute to the preservation of languages;
- d) function as a clearing house in the fields of multilingualism and linguistic diversity for decision makers, experts and the general public;
- e) promote translation and translation studies in order to enhance respect for and enjoyment of cultural diversity and intercultural understanding;
- f) contribute to worldwide monitoring of the implementation of language policies and language planning in the field of mother-tongue-based multilingualism;
- g) promote research and education in foreign language and culture studies;
- h) support and promote research into the role of the mother tongue as a human right;
- i) promote the investigation and analysis of and compilation of statistics on translation flows.

The functions of the Centre shall be to:

- a) work towards and encourage the preservation of languages by maintaining and supporting digital

archives for languages of the world;

- b) support language vitalization and create a “planetarium of languages” – a combination of a real and virtual reality museum on the languages of the world with exhibitions to be experienced both on location and on the internet;
- c) promote and disseminate research on languages and cultures as an element of the human cultural heritage by supporting research chairs for outstanding scholars, including scholars from developing countries;
- d) provide a forum and facilities for international doctoral students and academics, especially from the developing countries;
- e) devise and make available worldwide strategies and methods in support of endangered and indigenous languages through research projects, conferences and publications;
- f) support outstanding research in the field of language policy and politics;
- g) provide facilities and expertise for research projects and disseminate results with a special view to the objectives of the centre;
- h) demonstrate how native language visions and focused language policy can enhance literacy and education through the means of research projects and dissemination of knowledge;
- i) develop an international discussion platform;
- j) collaborate with all relevant UNESCO programmes, in particular in the field of translation flows observations, like the *Index Translationum* (International Translation Bibliography).

See the UNESCO Agreement<sup>2</sup> for further information.

As may be seen from these objectives and functions, the VIC is expected to play an important role, which will require innovative research and development work which the Centre plans to conduct in cooperation with national and international partners. During the preparative phase of the Centre, the use of language technology (LT) and language resources (LRs) have been pointed out as important components of the Centre's activities in the afore-mentioned domains. Hence, the VIC will be confronted with the challenge to develop, in cooperation with others, language tools and theories for research in these various aspects of language and culture to achieve the goals of the Centre. A particular attention will also be given to ensure that the Centre also provides adequate equipment for language learning, intended to facilitate communication in foreign languages. In addition, the VIC should develop innovative LT in order to disseminate information and give insights into the various aspects of language and culture to the general audience, e.g. the nature of the language and its usages, the nature of communication and the impact of social

<sup>1</sup> <http://www.unesco.org/new/en/bureau-of-strategic-planning/resources/category-2-institutes/culture/>

<sup>2</sup> [http://vigdis.hi.is/sites/vigdis.hi.is/files/unesco\\_samingur\\_undirritadur.pdf](http://vigdis.hi.is/sites/vigdis.hi.is/files/unesco_samingur_undirritadur.pdf)

environments and contexts and, finally, to give insights into the various ways in which languages can be learned.

The VIC's activities pertaining to the general public would include LT in a broad sense, e.g. interactive audio-visual and multimedia tools and academic expertise. The aim here would be to raise awareness among the general public (children, young adults and adults) about languages and culture related to languages. The idea is to use information technology (IT) to virtualize and allow people to experience abstract phenomena and knowledge. In this way, in addition to its academic functions and missions, the VIC will also serve as a language museum or experimentarium or lab on site as well as online. Indeed, in order to reach out to as many as possible, it is essential that a significant part of the exhibitions and other activities be accessible also on the internet.

## 2. The need for LT and LRs

It is clear that the practical use of LT, LRs and expertise within this field will be imperative when it comes to implementing the tasks assigned to the VIC. Some activities of the VIC, where expertise concerning LT and LRs is particularly needed, include:

### 1) Language teaching, learning and acquisition

Here, the focus will be on Computer-Assisted Language Learning (CALL) and how LT and LRs can be used to support students and enhance their results while learning foreign languages. In modern theories on language learning, it is considered as an individual and intellectual creative process, where the language is learned by using it for communicative purposes (Færch, Haastrup & Philipson, 1984; Richards & Rodgers, 2001; Schmidt, 1990). In addition, theories on motivation have been largely discussed, but due to different needs and situations of students, it is clear that language learning is not a predetermined process, but rather multiple processes, where the studies and their progress are determined by different needs, wishes, and motivations of students (Dörnyei & Skehan, 2003; Dörnyei & Ushioda, 2011). In theories on vocabulary and vocabulary learning, the student's needs are emphasized along with students' ways to link meanings and words in a situational vocabulary (Nation, 2001; Nattinger & DeCarrico, 1992).

The challenge linked to CALL is to use LT to meet new theories about language learning and its prerequisites and to create conditions for learning to best serve the needs of university students. Much can be done, such as using education material accessible online, as well as Information and Communication Technology (ICT), to guide students and follow their progress throughout their studies. In university education, it can be particularly interesting to use various language corpora to allow students to learn languages inductively, i.e. examine the authentic use of the language as it appears in the corpus and ask them to infer rules from it (Borin & Saxena, 2004). In another context, such LRs could constitute a base for comparing grammatical points between the mother language and the students' target language or as a tool to examine the authentic use of the

target language. In addition, it is important to use CALL in relation with the aspects of language learning where individual training and automatization is needed, such as the training of grammatical structures, common lexical phrases and pronunciation.

Recently, the practice of research based language teaching has been gaining momentum in language teaching on university level, i.e. teaching that takes into account new research results while allowing students to take part in further research and collect information about their own learning process at the same time. This may consist of a research where resources and data about the learners' language and their language uses are collected to constitute a language corpus which in turn can be compared to other corpora (e.g. see <http://www.ask.uib.no/>, Tenfjord, 2004).

In short, ICT, which will be a crucial component of the Centre, can play an important role in maintaining and promoting linguistic diversity, for instance, in documenting lesser-known languages and cultures as well as providing newer, more flexible learning tools and environment for language learning and teaching. Similarly, the internet makes it easier to spread awareness about lesser-known languages and their cultures. It also provides wider accessibility of information both to the research community and to the general audience. The ICT application will be further explored in the preparatory work of the Centre.

### 2) Language applications

In relation with the VLC, an emphasis will be put on developing CALL applications, which can be used in language learning in universities and elsewhere. This implies, first and foremost, developing dictionaries and other language applications on the web to promote and enhance language learning. The focus will be on the languages which are most relevant in an Icelandic context, primarily the languages taught within the school system: Danish (or Norwegian or Swedish), English, German, French and Spanish. With respect to research results in language use, in particular using language corpora, emphasis will not only be put on single words but also on lexical phrases (Nattinger & DeCarrico, 1992; Nation, 2001; Wray, 2002). In order to link explicit knowledge and meta-knowledge about language and actual authentic use of the target language, the online dictionaries will be connected to existing relevant corpora. Due to students' needs, a special focus will be put on search possibilities based on communicative situations (e.g. shopping, school or business situations), and different topics or themes (e.g. vegetation, language, fisheries). The dictionaries will include pronunciation examples in context with the languages. In addition, spoken language corpora and language technology will be used to develop language tools for pronunciation acquisition. These tools would be developed both for the new applications such as apps for telephones (Hauksdóttir, 2012), see [www.frasar.net](http://www.frasar.net), which is a product of research and also an innovative work at the Vigdís Finnbogadóttir Institute (<http://vigdis.hi.is/>), developed in cooperation with computational linguists and corpus

linguists in Sweden and Denmark. Comparative studies in phraseology between German and Icelandic are currently underway. Such a language tool is also under construction for phrases between Spanish and Icelandic. Another example of a research project in language learning, developed within the Vigdís Finnbogadóttir Institute in cooperation with Icelandic and international research institutes, is the Icelandic as a Second Language educational web Icelandic Online (see <http://icelandiconline.is/>). Further work on Icelandic as a Second Language teaching in a virtual environment is currently underway.

The VIC will put special focus on translation and translation studies. One of the challenges is to work with the possibilities for machine translation and research in translation studies.

### 3) Language Museum – Experimentarium

The biggest challenge related to the establishment of the VIC is to find ways to make language an object for observation and experience for people who do not necessarily possess expertise knowledge of languages. In this context, it would be interesting to highlight the nature of language and the various functions it has for individuals, how it is conditioned by different social situations and, finally, its multiple functions in society, in communications and for the entire world as the cultural heritage of all mankind. In particular, the relations between language and culture could be the object of specific attention. Currently, the work is concentrating on ways to realize the objectives regarding the language museum. From the beginning, the use of LT and virtual reality has been a part of the ideas concerning the language museum or the experimentarium.

The main purpose of the experimentarium is to inform and raise awareness of languages and their significance and role in preserving cultural and linguistic diversity. This will entail a “virtual experience” of different languages in a cultural context through the use of digital data on languages and culture as well as multimedia and LT. The visitors will be able to experience languages; both in written and spoken form, and learn how they are used in different social and cultural contexts. One could visualize a digital globe on which, by pressing on different countries and places, such as Ecuador, Tibet, Greece or Nuuk in Greenland, it will be possible to hear and see the respective languages in their authentic environments. In this context, it will be interesting to make different social information on languages accessible and observable in this creative virtual environment, such as: language distribution, status of the language (a dialect or a state language, whether or not under threat of extinction), variants (different dialects), history of the language, linguistic family, majority or minority language, whether the language exists as written or spoken, the writing system (which alphabet is used, i.e. symbols etc.), as well as information on literature available in the language and its foremost writers. An interesting exploitation of such a language platform demands an artistic and creative presentation, including the use of design and implementation of interactive museum installations and generative and interactive visualizations.

In this part of the VIC there will also be exhibitions displaying different aspects of languages, such as culture and traditions in various countries and regions. Also planned are exhibitions and programmes illustrating different traditional customs and national literatures in different linguistic areas and explaining for example how specific literary genres are more dominant in some communities than others, e.g. haiku in Japan, sagas in Iceland, the Inuit throat-song from Greenland and the song-dance in the Faeroe Islands. Cooperation with Icelandic as well as international scholars will be sought.

As the VIC project puts great importance on raising children’s and young people’s awareness of languages, it could be an interesting choice to develop electronic language games which could be made available on the internet.

### 4) Nexus of databases

According to the UNESCO agreement, one of the objectives of the VIC is to work towards the preservation of languages by maintaining and supporting digital archives for languages of the world. This is one of the centre’s most important and demanding role. To date, much effort has already been put in collecting information and documentation about languages, such as the Endangered Languages Archive at SOAS University of London, see: <http://www.elar-archive.org/index.php> and the Leipzig Endangered Languages Archive, see <http://www.eva.mpg.de/linguistics/resources/leipzig-endangered-languages-archive-lela.html>. It is clear that it is not realistic to collect data on all the world’s languages; however, the institute could contribute by housing or coordinating databases and by disseminating information on their existence. In the beginning, the focus will be on collecting and coordinating existing data concerning the fourteen languages which are taught at the University of Iceland. The next step will be to add minority European languages and then gradually extend to other languages. By making this data accessible in one place, a unique venue will be created for research and academic dialogue on languages and cultures.

### 5) Home areas

In the VIC, there will be special home areas, or zones, for all the languages taught at the University of Iceland. These include English; the Nordic languages Danish, Finnish, Norwegian and Swedish; the Roman languages French, Italian and Spanish; Russian; German; the Classic Languages Greek and Latin; and the Asian languages Japanese and Chinese. The home areas will be equipped with excellent facilities including applications and resources required for effective language learning and teaching in the respective languages, as well as information and data on literature, culture and societies. In addition to the fourteen languages taught at the University, the centre will feature special home areas for Faroese, Greenlandic and the Sami languages.<sup>3</sup>

<sup>3</sup> I would like to express my gratitude to Professor Anju Saxena,

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