

TERM CREATION FOR IRISH-MEDIUM THIRD-LEVEL EDUCATION AND VOCATIONAL TRAINING

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1. Background

Fiontar is a special unit in Dublin City University, set up in 1993 to administer the BSc. in Airgeadas, Ríomhaireacht agus Fiontraíocht (BSc in Finance, Computing and Enterprise) which is a new degree taught at the university through the medium of the Irish language. When the degree was ratified, it was accepted that such a course could be taught without textbooks in Irish, but that it would be necessary to have a body of terminology, in an accessible medium, for all the areas of the programme. The terminology work commenced one year before the first intake of students onto the programme and has continued since then. The BSc course is of four years duration and by the time the first students have finished their fourth year – in June 1998 – a substantial database of technical terms in Irish will have been compiled by *Fiontar*.

The *VOCALL*¹ project is funded by the European Commission under the Leonardo Programme. The objective of this project is to build language learning tools for vocationally-oriented learners in the areas of computers, office skills and electronics. *VOCALL* focuses on less widely used and taught languages (LWUTLs), including Irish. Written language resources such as lexica and termbanks are not well developed as learner aids in the case of LWUTLs. We are in the process of compiling multilingual glossaries of technical terms in the above subject fields as part of a multimedia CALL package. This work involves the creation of a number of new terms in Irish. The tool will be marketed as a self-learning tool for both foreign language (FL) learners and disadvantaged learners of their first language (L1), in both vocational and professional training in the areas mentioned (see Way, A; 1997, this volume).

2. Sourcing Existing Irish Terms

Both *Fiontar* and *VOCALL* encountered difficulties when attempting to build a corpus of teaching materials in Irish from which terms could be derived. There are no textbooks in Irish as yet covering the subject fields in question with the exception of some used in second-level education. Neither are there any periodicals in Irish which deal with the chosen areas.

Fiontar has produced a weekly column on business matters for an Irish language newspaper, *Foinse*. Raidió na Gaeltachta and Teilifís na Gaeilge (Irish language radio and television stations) occasionally have short interviews with experts on financial and business matters, but these experts would frequently use terminology in English because

¹ This work has been made possible through EU-funding under the *Leonardo* Programme.

they would not be familiar with the Irish terms and because, even if they used the Irish terms, they would feel that the public would not understand them and soundbytes these days do not allow the time to define terms².

Lacking an Irish-language corpus, both groups are working from lists of terms in English: either sourcing established standardised equivalent terms in Irish or creating new terms which then have to be submitted for approval and standardisation to An Coiste Téarmaíochta (The Irish Terminology Committee). An Coiste Téarmaíochta has published dictionaries of Business, Computer and Science terms which we use as a basis for our work (see references).

3. An Coiste Téarmaíochta (The Irish Terminology Committee)

When sourcing or creating terms, both groups work closely together with An Coiste Téarmaíochta. The Permanent Irish Terminology Committee was established by the Minister of Education in 1968, the principal task being to provide terminology in Irish for the subject fields covered by the Irish educational system. The Committee brings together subcommittees of experts in various subject fields in order to gather and develop a terminology in Irish for each field. The resulting terminologies are then published in the form of dictionaries. An Coiste Téarmaíochta will also provide terminology for any individual or group who request it, but this is not always possible due to the fact that there are only two full-time terminologists working for the committee (Breathnach 1993).

An Coiste Stiúrtha, the Steering Committee of An Coiste Téarmaíochta, meets once monthly. This committee chooses the subject fields to be tackled next and establishes the subcommittees for each field. At least one member of An Coiste Stiúrtha and at least one of the full time terminologists sit on each subcommittee. When Fiontar or VOCALL submit a list of terms to An Coiste Téarmaíochta for approval, the terms are firstly examined by the terminologists, and if any terms prove to be problematic, or if a new subject field is in question, a subcommittee is formed consisting of experts in the area in question, and the terminologists from An Coiste Téarmaíochta, Fiontar or VOCALL, in order to ensure that the new terms will be acceptable to all parties.

4. Term Creation

4.1. Background

Lesser-used languages such as Irish do not have the broad user-base and prolific media of widely used languages. Users of technological terminology in Irish are geographically scattered and numerically small. Terms in English are already established, and are often borrowed directly into the Irish language. New terminology is not widely known and not always accepted. Some people tend to invent their own terms and have a problem with the concept of standardised terminology. There is often a delay, also, between the time a term is coined or 'borrowed' and the provision of a 'standardised' term. The result of the above is the creation of a large number of synonyms, which can be especially confusing for students who are learning new concepts and do not have the expertise to judge whether a synonym is such in fact, or whether a term refers to a different concept.

4.2. Guidelines for term creation

We attempt where possible, to follow the following guidelines used by An Coiste Téarmaíochta when creating terms. These guidelines correspond more or less to those contained in the ISO document R 704 '*Naming Principles*', which are listed by Sager (1990) who refers to 'their limited scope'.

² Ar Thóir an Fhocail Chruinn, Iriseoirí, Téarmeolaithe agus Fadhbanna an Aistriúcháin, Eagarthóirí (Editors): Máirín Nic Eoin agus Liam Mac Mathúna.

1. As far as possible there should be a one-to-one correspondence between a concept and the term used to signify that concept
2. Terms already in use are not to be changed or dispensed with, without good reason.
3. A correspondence should exist between related terms on both a morphological and a semantic level.
4. All terms are to have a precise form and meaning, and ambiguity is to be avoided.
5. The use of the selected term must be applicable to other areas or related disciplines. In terms of its structure it should be possible to transform a noun into a verb or adjective, and it should be possible to use it as a constituent in a compound word.
6. All new terms must conform to the orthographical and grammatical conventions used in Irish and their pronunciation must conform to the phonological and phonetic patterns of Irish.

4.2.1 Theory Vs Practice

Let us examine these guidelines in closer detail to see whether or not they can be followed in practice. Guideline 1 is certainly an ideal which all terminologists should strive to achieve. It basically states that a term should be ‘monosemous’.

According to Picht and Draskau (1995):

‘A term is monosemous when it designates one concept only. If this concept, in its turn, is capable of realisation solely by the same term, we may speak of absolute monosemy or – in “Wuster’s phrase – the term is “eineindeutig”. It goes without saying that monosemy represents in terminology the optimal situation as regards the term/concept relationship. However, this ideal occurs only rarely.’

One of the problems we have encountered in term creation is that of ‘polysemy’. Picht and Draskau (1995) state that:

‘Polysemy occurs when a term denotes two or more distinct concepts which are related in some respects, although they do not necessarily belong to the same system of concepts’.

An example of a polysemous term which caused considerable difficulties for the computing lecturers at Fiontar is the term **feidhmiú**. **Feidhmiú** can mean *function* (vn), or *execution* (vn) or *performance* (s), all terms from the subject field of computing. Problems would certainly arise if you wanted to ‘implement an executable function’, as this would translate as ‘**feidhm infheidhme a chur i bhfeidhm**’! (Uí Bhraonáin 1997)

Guideline 2 is also very important. If a new term is introduced into the language and is widely accepted, it can prove extremely problematic to change that term even if the replacement term proposed is more accurate. Changing a term may lead to synonyms as not all may choose to use the replacement term and as we have already stated in 4.1, synonyms can lead to confusion for students trying to absorb new concepts. An example of this is the Irish term **comhadlann**. **Comhadlann** is a new term in Irish for a *directory* (computer term). The established computer term for a *directory*, as listed in *Téarmaí Ríomhaireachta*, the dictionary of computers published by An Coiste Téarmaíochta is **eolaí**. However, in this case **eolaí** means a ‘guide’ such as a telephone directory. We have decided to use instead the term **comhadlann**, proposed by a lecturer at Fiontar and since ratified by An Coiste Téarmaíochta, meaning ‘a place where files (computer files in this case) are kept’.

By working closely with An Coiste Téarmaíochta, we can ensure that all new terms we create correspond to already existing related terms on both a morphological and semantic level.

e.g. One of the new terms required in the area of computing was: ‘*expanding opcode*’ (‘*opcode*’ meaning *operation code*). The term ‘*operation code*’ had already been created by An Coiste Téarmaíochta and was published in their dictionary of computer terms. In creating the new term we made sure to use the previously created term for ‘*operation code*’, which was ‘*cód oibríochta*.’ The new term ‘*expanding opcode*’ is ‘*cód oibríochta so-fhairsingthe*’.

Guideline 6 presents difficulties at times. Part of the terminology work at Fiontar involves the examination of lecturers’ notes to ensure that each lecturer is using the same term for the same concept and also to see that they are being used correctly from a grammatical point of view. Irish has a complex system of grammar with two genders for nouns, and generally three cases in both singular and plural. Initial changes, such as lenition or eclipsis, are made following certain rules. Irish grammar was standardised in 1958³, but it is not always clear which rules apply in cases of modern terminology.

4.3. Methods of term creation

Most of our term creation falls under the following categories.

- a) Different types of compounding (Picht & Draskau 1985)
- b) Calque (Ó Deirg 1988)
- c) Transliteration (Ó Deirg 1988)
- d) Creating internationalisms (Felber 1984).
- e) Transferred terms (Felber 1984); borrowing an Irish term from another subject field.

An example of a compound of two native roots is *miondíol* meaning *retail* (business term). *Mion*, an adjective, is a native root meaning *small*. *Díol*, a noun or a verb, is a native root meaning *sale* or *sell*. An example of calque is the finance term *Belgian dentist*, a term used to describe the typical Eurobond investor which was translated into Irish as *fiaclóir Beilgeach*. *Fiaclóir*, a noun, means *dentist*, and *Beilgeach*, an adjective means *Belgian*.

When we began working on term creation at DCU, we were given a copy of the rules for transliteration used by An Coiste Téarmaíochta⁴. A good example of transliteration is the finance term *dingo*. The process of transliteration into Irish lengthens the the vowel ‘i’ in ‘*dingo*’ to ‘io’. ‘O’ changes to ó. Thus *dingo* becomes *diongó*. These two terms are also good examples of the difficulties we have encountered when attempting to translate ‘slang/ jargon’(see 4.5).

4.4. Examining existing terminology

According to Felber (1984): ‘International forms having the same meaning in different languages facilitate technical communication since no knowledge of foreign languages is necessary. They represent the bridge from one national language to the other one. Therefore, this should be kept in mind, particularly when standardizing terminologies for international use.’ Many of the new business and finance terms in Irish have Greek or Latin roots, such as the following examples; (1) *Eurobond* – *Eorabhanna*; (2) *eurocurrency* – *eorairgeadra*. A colourful example of a transferred term is the term *nathair* which is the Irish term for the financial term ‘*snake*’. In 1972 it was arranged that

³ Gramadach na Gaeilge agus Litriú na Gaeilge; Oifig an tSólathair, 1958.

⁴ See ‘Treoir Theicniúil’ in Foclóir Eolaíochta /Dictionary of Science; An Gúm, 1994.

European currencies would be tied together within specified limits. This was called the 'snake'. *Nathair* meaning *snake* or *serpent* depicts the same metaphor in Irish. We also examine the terms which already exist in the terminology dictionaries published by An Coiste Téarmaíochta. Computer technology in particular, and Finance to a lesser extent, are developing at such a rate that certain terms which were suitable 5 years ago no longer represent the concept for which they were devised. A good example of this problem, where the concept described by a term changes over time, is the computing term ripple adder. *Ripple adder* is given in Irish as *suimitheoir ardluais* in *Téarmaíocht Ríomhaireachta/Dictionary of Computing Terms* which was published in 1990. The Irish term means literally 'high-speed adder'. Computing technology has developed in such a way that the ripple adder is now considered very slow, so the Irish term had to be changed. It is now *suimitheoir tonnánach* which is closer to the concept of 'rippling'.

4.5. Dealing with Slang/ Jargon

Slang is often used in English, especially in the areas of computing and finance. Some examples of slang terminology in the area of Finance which the Fiontar terminologists have come across are: *straddle*, *strangle*, *strip*, *strap*, *butterfly spread*. These are concepts which would not be understood by those of us who are not part of the world of Finance. Different countries have different traditions when it comes to translating slang. The French use an equivalent slang term in their own language: e.g. 'kickback' - '*dessous de table*'. The Spanish keep the English language version of slang terms but translate ordinary terms into Spanish. With the help of An Coiste Téarmaíochta, we have tried where possible to avoid transliteration or calque of foreign slang. We attempt, instead, to ensure that the Irish term accurately illustrates the concept using native words. (Uí Bhraonáin 1997) The following examples of newly created Irish terms are actually easier to understand than the English terms and both transliteration and calque have been avoided.

e.g. *blue chip stock* (Finance) - *scothstoc* (meaning 'the best stock')
plain vanilla swap (Finance) - *gnáthbhábhtáil* (meaning 'ordinary swap')
heaven and hell bonds (Finance) - *bannaí bogadaí* (meaning 'rocking bonds')

4.6. Homophones

Homophones as in the following example can cause a lot of confusion when used orally in a classroom situation. e.g. *an aidhm* - *the object*; *an fheidhm* - *the function*. It can be difficult to foresee such problems when creating a term with pen and paper sitting at a desk!

4.7. Conclusion

Due to recent rapid developments in technology, and the resulting proliferation of new terms in English, all languages other than English are experiencing problems with term creation. This paper has attempted to illustrate the problems involved in the creation of terminology in Irish, particularly when addressing the terminological needs of Irish – medium third level education and vocational training. Many of these difficulties are specific to less widely used and taught languages.

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LABURPENA / RESUMEN / RÉSUMÉ / ABSTRACT

Irlanderaren bidezko hezkuntza unibertsitariorako eta lanbide heziketarako terminoak sortzea

Dublin Hiriko Unibertsitateko atal bat da *Fiontar*, zeinak Ekonomia, Informatika eta Enpresa-ikasketetako Lizentziatura ematen baitu, irlandararen bidez. Irakasleek eta ikasleek, irlanderazko hitzun trebeak izan arren, ez dute aukerarik izan titulu horretarako behar den terminologia teknologiko zabala ezagutzeko. Gai guztiak irlanderaz ematen direnez gero, irakasgaien erabilitako terminologia osoak egon behar du eskuragarri irlanderaz. Horretarako, Ekonomia, Informatika eta Enpresa-ikasketetako Lizentziaturako ikasleek eta irakasleek termino-banku elebiduna (irlandera-ingelesa) sortu dute beren-beregi.

VOCALL proiektua (Vocational Language Learning for Less Widely Used and Taught Languages - Lanbide Arloetako Hizkuntzaren Ikaskuntza Gutxi Erabiltzen eta Irakasten Diren Hizkuntzetan) Europako Batzordeak finantzatzen du Leonardo da Vinci Programaren barruan. Proiektuaren koordinadore da *Dublin Hiriko Unibertsitatea* (Dublin, Irlanda). Informatika, bulego-lana eta eraikuntzako ikasleentzako hizkuntza ikasteko tresnak egitea da helburua. Gutxi erabiltzen eta irakasten diren hizkuntzetan kontzentratzen da proiektua (LWUTL), irlandera barne. Informatika, bulego-lana eta eraikuntzako arloetako termino teknikoen glosario eleanizduna biltzen ari da VOCALL, eta horrek esan nahi du arlo horietako irlanderazko termino berri ugari sortzen ari dela.

Terminology Committee of the Irish Language-ren laguntzaz (An Coiste Téarmaíochta - Irlanderarako Terminologia Batzordea), Fiontar eta VOCALL irlanderaren bidezko hezkuntza unibertsitariorako eta lanbide-heziketarako terminologia-beharrizanak betetzen ari dira. Gure komunikazioa talde bi horiek terminoak sortzeko erabiltzen duten metodologiak izango da. Irlanderazko terminologia normalizatuaren erabilpena bultzatzeko aurkitu diren arazoak ere ikusiko ditugu.

La creación de términos para la educación universitaria y para la formación profesional en habla irlandesa

Fiontar es una unidad inserta en la Dublin City University que imparte la licenciatura de Finanzas, Informática y Empresariales en lengua irlandesa. Ni profesores ni alumnos, aun siendo correctos hablantes del irlandés, han tenido oportunidad de familiarizarse con la extensa terminología técnica necesaria para esta licenciatura. Siendo todas las asignaturas impartidas en irlandés, toda la terminología que se utilice en el curso debe estar disponible en esta lengua. Y, con este fin, se ha creado un banco terminológico bilingüe (irlandés-inglés) para el uso de alumnos y profesores de la licenciatura de Finanzas, Informática y Empresariales.

El proyecto *VOCALL* (Vocational Language Learning for Less Widely Used and Taught Languages) es un proyecto fundado por la Comisión Europea en el marco del Programa Leonardo da Vinci. El proyecto está coordinado por la *Dublin City University* (Dublín, Irlanda). El objetivo es construir herramientas de aprendizaje de la lengua para estudiantes con una orientación profesional en las ramas de informática, secretariado y construcción. El proyecto está enfocado hacia lenguas minoritarias en cuanto al uso y enseñanza, incluido el irlandés. El proyecto *VOCALL* está en proceso de recopilación de un glosario plurilingüe de términos técnicos de las áreas de informática, secretariado y construcción, y esto supone la creación de una larga serie de nuevos términos en irlandés, en las áreas mencionadas.

Con la ayuda del Comité Terminológico para la Lengua irlandesa (An Coiste Téarmaíochta) *Fiontar* y *VOCALL* están encauzando las necesidades terminológicas tanto de la educación universitaria en irlandés como de la formación profesional en esta lengua. Nuestra ponencia estudiará la metodología utilizada por ambos grupos para crear nuevos términos. La ponencia también tratará sobre las dificultades halladas para potenciar el uso de la nueva terminología estandarizada del irlandés.

La création de termes pour l'enseignement supérieur et la formation professionnelle en utilisant comme moyen l'irlandais

Fiontar est un département de l'Université de la Ville de Dublin qui prépare aux licences d'Economie, d'Informatique et de Gestion de l'Entreprise, en utilisant comme moyen: l'irlandais. Le corps enseignant et les élèves qui parlent irlandais couramment n'ont pas eu l'occasion de se familiariser avec une terminologie technologique aussi vaste qu'il est nécessaire pour ces licences. Etant donné que toutes les matières sont enseignées en irlandais, toute la terminologie technologique utilisée pendant l'année scolaire doit également être disponible en irlandais. Pour atteindre cet objectif, on a créé une banque spéciale de termes bilingues (irlandais-anglais) qui se trouve à la disposition des élèves et du professorat des cours d'Economie, d'Informatique et de Gestion de l'Entreprise.

Le projet *VOCALL* (Vocational Language Learning for Less Widely Used and Taught Languages) est un projet fondé par la Commission Européenne sous le Programme Leonardo Da Vinci. Le projet est coordonné par l'Université de la Ville de Dublin, à Dublin, en Irlande. L'objectif est de construire des outils d'apprentissage de la langue pour

des élèves ayant une orientation vocationnelle dans les domaines de l'informatique, de l'administration et de la construction. Le projet est centré sur les langues d'usage mineur et d'apprentissage (LWUTLs) y compris l'irlandais. Le VOCALL se trouve dans le processus de la compilation d'un glossaire multilingue de termes techniques dans les domaines de l'informatique, de l'administration et de la construction et ce processus signifie la création d'un grand nombre de termes irlandais nouveaux dans ces domaines.

Avec l'aide du Comité de Terminologie pour la Langue Irlandaise (An Coiste Téarmaíochta), Fiontar et VOCALL abordent les besoins terminologiques de l'enseignement supérieur et de la formation professionnelle donnés en irlandais. Notre exposé se rapporte à la méthodologie utilisée par les deux groupes quant à la création de termes. L'exposé se rapportera également difficultés qui surgissent au moment d'encourager l'utilisation de la nouvelle terminologie normalisée en langue irlandaise.

Term creation for Irish-medium third-level education and vocational training

Fiontar is a unit in Dublin City University which runs a BSc in Finance, Computing and Enterprise, through the medium of the Irish language. Staff and students, while fluent speakers of Irish, have not had occasion to become familiar with the extensive technological terminology required for this degree. As all subjects are taught through Irish, all terminology used on the course must be available in Irish. To this end, a special bilingual (Irish-English) termbank has been created for use by students and staff on the BSc in Finance, Computing and Enterprise.

The *VOCALL* project (Vocational Language Learning for Less Widely Used and Taught Languages) is a project funded by the European Commission under the Leonardo Da Vinci Programme. The project is coordinated by *Dublin City University*, Dublin, Ireland. The objective is to build language learning tools for vocationally-oriented learners in the areas of computers, office skills and electronics. Focussing on less widely used and taught languages (LWUTLs) including Irish, the *VOCALL* partners are compiling multilingual glossaries of technical terms in the areas of computers, office skills and electronics and this involves the creation of a large number of new Irish terms in the above areas.

With the help of the Terminology Committee for the Irish Language (An Coiste Téarmaíochta) Fiontar and VOCALL are addressing the terminological needs of both Irish-medium third level education and Irish-medium vocational training. Our paper will discuss the methodology used by both groups in term creation. The paper will also address the difficulties encountered in encouraging the use of new and/or standardised terminology in the Irish language.