Impact case study (REF3)

Institution: Cardiff University

Unit of Assessment: English Language and Literature (27)

Title of case study: Increasing everyday use of the Welsh language through policy change

Period when the underpinning research was undertaken: 2010 – 2020

Details of staff conducting the underpinning research from the submitting unit:

Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Alison Wray	Professor	01/08/1999 – present
Jeremy Evas	Lecturer	12/12/2012 – 17/07/2019
Dawn Knight	Reader	26/01/2015 – present

Period when the claimed impact occurred: 01/11/2013 – 31/12/2020

Is this case study continued from a case study submitted in 2014? No

1. Summary of the impact (indicative maximum 100 words)

The Welsh Government's goal is to have one million active Welsh speakers by 2050. Cardiff applied linguists investigated the current challenges to achieving this goal across several national and social contexts: learning Welsh as an adult, speaking Welsh within families and in communities, and the technology and resources needed to support Welsh language use. Outputs and recommendations from the research led to changes to the national Welsh for Adults curriculum and a reconfiguration of the Wales-wide Mentrau Iaith community support scheme. They also shaped the Welsh Government's draft National Policy on Welsh Language Transmission and Use within Families and the Welsh Government Action Plan for Welsh-language Technology, which culminated in an innovative corpus of over 11M Welsh words.

2. Underpinning research (indicative maximum 500 words)

Supporting the use of Welsh in everyday life is key to the Welsh Government's goal of one million Welsh speakers by 2050. Currently approximately 45,000 people speak Welsh daily (2020 Annual Population Survey for Wales). Cardiff researchers, with cross-disciplinary expertise in applied and corpus linguistics (Wray, Knight), behavioural change in language use (Evas), and Welsh (Evas), led a series of research projects investigating barriers to Welsh language use.

2.1 Learning Welsh as an adult

From 2010-12, Wray, at that time seconded 0.4FTE from the School of English, Communication & Philosophy to the School of Welsh to cross-fertilise expertise and develop Applied Linguistics research collaborations, jointly led a Welsh Government project to investigate ways of improving Welsh language teaching and learning in adults **[G3.1]**. Wray conceptualised and designed the project, directed the fieldwork and analysis, worked with external advisors, and completed a detailed literature review into how lessons on effective language teaching and learning worldwide might relate to Wales. The fieldwork identified what was and was not working in current provision, taking in the views of learners (all stages), tutors and materials developers across the different providers within Wales. It also identified concern that the Welsh of West Wales was insufficiently represented in teaching materials. The research findings led to the following recommendations **[3.1]**:

- development of a new national Welsh for Adults curriculum sub-designed for three regional varieties (North, South and West);
- enhancements to teaching materials including vocabulary lists and graded readers;
- revised training for tutors and new guidelines for course book writers;
- more flexible learning opportunities, e.g. informal learning, intensive courses;
- the development of a representative Welsh language corpus.

2.2 Language use in families and local communities

In 2013, as a direct result of this project, the Cardiff team investigated the role of community-based language planning in Wales, focussing on three organisations, including the Mentrau

Iaith (22 community-based Welsh language support providers). The research found the Mentrau Iaith successful in promoting Welsh language use through community development and language planning strategies **[3.2]**. The research report recommended that the Welsh Government:

- establish a longer funding cycle to enable more effective planning, target-setting and impact-monitoring, with additional funding to support quality and sustainability;
- encourage community collaboration between development agencies, to more effectively promote the wider use of the Welsh language;
- initiate behavioural change training to assist language adoption.

The Cardiff team subsequently undertook a 2015 Welsh Government-funded study of language transmission and use in families **[G3.2]**. The research found that intergenerational transmission of Welsh is not a decision, but an unconscious behaviour **[3.3]**. Family structures and linguistic practices are key to improving transmission: for example, living with two Welsh-speaking parents is likely to increase transmission **[3.3]**. The research recommended adopting socio-psychological approaches and techniques for behavioural change to help achieve the Welsh Government's goal of increasing the number of Welsh language users **[3.4]**.

2.3 Infrastructure to support Welsh language use

The Welsh for Adults research outlined in Section 2.1 recommended creating a corpus of the Welsh language, as one means of embracing new technologies in language teaching and support. Research conducted by the Cardiff team revealed that:

- Welsh users favoured Welsh-language interfaces in everyday technology (e.g. phone apps, computer software, parking meters, cash points) and learners used them to gain exposure to Welsh, supporting habit change and normalising usage **[3.5]**;
- improving language choice architecture in e-service provision (e.g. websites and ATMs) to be "friction free" could increase the uptake of language services e-provision **[3.6]**.

Corpora are key to machine translation and web search tools, enabling users to access technologies in their preferred language. For the ambitious goal of creating a major Welsh language corpus, Knight led an interdisciplinary team (including academic expertise from within and beyond Cardiff, and non-academic partners including the BBC, S4C, and other major publishers) to develop a new linguistic resource and innovative approaches to collecting and tagging the material. The £1.8M ESRC/AHRC-funded project **[G3.3]** resulted in *Corpws Cenedlaethol Cymraeg Cyfoes* (CorCenCC). At over 11 million words, it is the largest corpus of contemporary spoken, written and e-language Welsh. Collected and tagged in part using new crowd-sourcing methods, the dataset is integrated into a bespoke infrastructure built to enable the examination of patterns of frequency, register, pronunciation, grammar, morphology and word collocation. Novel Welsh language part-of-speech, semantic taggers and tagsets were also created, along with a novel pedagogic toolkit and word frequency lists. All tools and data are open source, to facilitate the future creation of corpora for other languages **[3.7]**.

In sum, Applied Linguistics research by Wray, Evas and Knight has optimised the learning of Welsh through recommendations for policy, modifications to practice, and creating a major corpus resource accessible to all users and researchers of Welsh.

3. References to the research (indicative maximum of six references)

[3.1] Mac Giolla Chríost, D., Carlin, P., Davies, S., Fitzpatrick, T., Jones, A., Heath-Davies, R., Marshall, J., Morris, S., Price, A., Vanderplank, R., Walter, C. & **Wray, A.**, *Welsh for adults teaching and learning approaches, methodologies and resources: a comprehensive research study and critical review of the way forward* (Cardiff: Welsh Government), 2012. 323 pages; orca.cf.ac.uk/39114/

[3.2] Evas, J., Williams, C.H., Mac Giolla Chríost, D. et al. *A review of the work of Mentrau Iaith, Language Action Plans and the Aman Tawe Language Promotion Scheme,* 2014, Cardiff: Welsh Government. 101 pages, orca.cf.ac.uk/id/eprint/53783

[3.3] Evas, J., Morris, J., et al. *Welsh language transmission and use in families* (Cardiff: Welsh Government), 2017, 209 pages, gov.wales/welsh-language-transmission-and-use-families-0

[3.4] Evas, J. & Mac Giolla Chríost, D., *Papur amlinellol ar gysyniadau newid ym-ddygiad yng nghyd-destun cynllunio ieithyddol [Behaviour change concepts in the context of language planning]* (Language, Policy and Planning Research Unit, Cardiff University), 2017. Available from HEI on request.

[3.5] Evas, J., *The Welsh language in the digital age*, 2013, Berlin: META-NET, orca.cf.ac.uk/48988

[3.6] Evas, J. & Cunliffe, D., *Behavioural economics and minority language e-services: the case of Welsh* . In Morris, J. & Durham, M. eds. *Sociolinguistics in Wales*. Palgrave MacMillan, 2016, pp.61-91. orca.cf.ac.uk/88379/

[3.7] Knight, D., et al. *Corpws Cenedlaethol Cymraeg Cyfoes [The National Corpus of Contemporary Welsh],* 2020. http://doi.org/10.17035/d.2020.0119878310

Selected grants:

[G3.1] Mac Giolla Chríost, D., Heath-Davies, R., Price, A, & **Wray, A.** *Research into improving the way in which the Welsh language is transferred to adults.* Welsh Government, 06/04/2010 – 31/03/2012, £303,630

[G3.2] Evas, J., Morris, J., & Whitmarsh, L. *Welsh language strategy: A living language for living.* Welsh Government, 23/11/2015 – 22/04/2017, £60,825

[G3.3] Knight, D., Morris, J., Fitzpatrick, T., Spasic, I. & **Evas, J.** *Corpws Cenedlaethol Cymraeg Cyfoes The National Corpus of Contemporary Welsh: A community driven approach to linguistic corpus construction,* UKRI (ESRC & AHRC), 01/03/2016 – 30/11/2020, £1.8 million

4. Details of the impact (indicative maximum 750 words)

Cardiff research informed Welsh Government policies on language learning, language transmission among families and communities, and Welsh language technologies, as well as the work of NGOs implementing these policies. The *Corpws Cenedlaethol Cymraeg Cyfoes* (CorCenCC) provided new technological infrastructure for delivering aspects of Welsh Government policy on technology and language support. A user-driven resource, it meets the needs of a wide range of stakeholders from individual learners to broadcasters and publishers.

4.1 Improved opportunities for learning Welsh as an adult

The project report, co-authored by Wray and other Cardiff colleagues **[3.1],** was cited in the Welsh for Adults Review group's report *Raising Our Sights: Review of Welsh for Adults* in July 2013 (just prior to the REF 2021 impact period). Welsh Government responded that it was "*important that the curriculum is revised in light of the findings*" **[5.1**, p.6**]**, and in 2016 the National Centre for Learning Welsh was established to implement the recommendations **[5.2, 5.3]**. This Centre is responsible for all aspects of the Learn Welsh sector, from curriculum and course development to resources for tutors, research, marketing and e-learning **[5.3]**. It coordinates Welsh language learning for 13,260 learners across Wales (2018-19), via 11 course providers. Director Helen Prosser noted that "*the National Centre has implemented many of the research recommendations in the Cardiff University report*" **[5.3]**. Providing specific examples, Prosser confirmed that the National Centre has**:**

- implemented a new Welsh for Adults curriculum on a national basis with three regional varieties which "*has resulted in many benefits for students*". She also noted it "*led to better tutor training…aligned to the national course*" **[5.3]**.
- enhanced teaching materials to ensure that *"vocabulary has been given a higher priority in the new courses*", with new colour coded vocabulary materials **[5.3]**.
- revised training for tutors and developed new guidelines for tutors creating coursebooks. Prosser stated that "*prior to the Centre, there was one two-year course for training tutors. In response to the research recommendations, the Centre has now created a short course called Starting Teaching*" **[5.3]**. Accredited by the Welsh Joint Education Committee, the course has doubled the numbers of tutors being trained and ensured there is an increased number of newly qualified teachers available.
- initiated more flexible learning opportunities, including informal learning and intensive courses. Prosser notes that, as recommended by the research, national events to support informal learning are now organised by the Centre **[5.3]**.

Prosser summarised that "*these changes have produced (and continue to produce) benefits for students and tutors of the Welsh for Adults programme*" **[5.3]**.

4.2 Improved opportunities for language use in families and local communities

Cardiff research influenced Welsh Government funding for community language organisations and initiated a new 2020 policy on transmission in families:

a. Enhanced operation of community-based language planning agencies

In March 2014, the research on the Mentrau Iaith **[3.2]** was discussed in the Senedd with the then First Minister noting: "*We agree with the review's conclusions, and we are eager to proceed with implementing the majority of the recommendations*" **[5.4a]**. Richard Thurston, Welsh Government's Deputy Chief Social Research Officer, confirmed recommendations from **[3.2]** *"provided the basis for a more strategic approach to the planning of initiatives to facilitate language use at community level"* **[5.5]**. For example:

- In 2014 the Welsh Government announced additional funding amounting to £750,000 over two years for the Mentrau Iaith **[5.4b]**. Since 2015 each Menter Iaith has received ≥£60,000 to employ at least two members of staff and increase capacity for new activities, totalling over £7 million funding in the REF period. The funding cycle for the Mentrau Iaith was increased to 3 years from 2016, with a requirement for organisations to include a plan for effective community partnership working, e.g. with Communities First, local authorities, and other third sector organisations **[5.4b]**.
- Welsh Government added intensive training to effect behavioural change **[3.2]** as a core part of Mentrau Iaith Cymru's role in coordinating the organisations across Wales **[5.4b]**.

b. Welsh Government policy on Welsh language transmission in families

Based on his research into Welsh language transmission in families **[3.3]**, Evas was seconded to Welsh Government in 2017 to lead on implementing the transmission policy plan. Thurston confirmed that Evas' study was used *"to inform the Welsh Government's draft national policy on Welsh language transmission and use in families"* **[5.5]**. The policy **[5.6]** (part of *Cymraeg 2050*), went to consultation in early 2020. Delayed due to Covid-19 **[5.5]**, it will be published in 2021. It cites Cardiff research **[3.4]** as the underpinning source and reflects the research in:

- noting how "the transmission of Welsh isn't a decision, but an unconscious behaviour" **[5.6**, p.19**]**;
- acknowledging the importance of family structures and linguistic practices in increasing transmission and therefore the numbers of Welsh speakers **[5.6**, p.8**]**;
- committing to reviewing Welsh Government's existing work on language transmission to "make sure that it's based on evidence from behavioural science" **[5.6**, p.25**]**.

The policy recognises these principles as the basis for "tools, methods and resources to encourage more people to pass Welsh on to their children as a matter of choice" **[5.6**, p.6**]**. Following the findings of the Cardiff research **[3.3, 3.4]**, it outlines long-term behavioural change techniques to improve Welsh language transmission in families, including a language use pledge programme and developing an online presence to support parents' confidence in speaking Welsh with their children **[5.6**, pp. 23-24**]**.

4.3 Improved infrastructure to support Welsh language use

Cardiff research also influenced Welsh Government policy on Welsh language technology. In 2017, Evas was appointed to the Welsh Government's Welsh Technology Board **[5.7**, p.30**]** to advise on technological and digital issues in relation to Welsh. Richard Thurston confirmed that Evas' contributions – in particular, *"[raising] the importance of reducing the friction that makes it more difficult for Welsh speakers to access services in their language*" – "*transferred directly*" to the Board's 'Welsh Language Technology Action Plan' (2018) **[5.5]**. For example:

- Work Package 7 of the Action Plan focusses on Welsh interfaces for technology users in education settings **[5.7,** p13**]**. Echoing Evas' research **[3.6]**, it outlines steps so that *"students, pupils and staff can use a Welsh language UI and facilities to help create Welsh content automatically and in a friction-free manner"* **[5.7**, p.11**]**.

- Work Package 4 outlines steps "*to create a friction-free Welsh language choice architecture*" **[**proposed in **3.6]**, referring to the ease and feasibility with which users can opt to use interfaces and technologies through Welsh **[5.7**, p.11**]**.
- The Action Plan notes the need for "*up-to-date linguistic infrastructure to enable us to realise the vision of Cymraeg 2050*" **[5.7**, p.24**]**, e.g. dictionaries, terminological resources and a corpus.

The Action Plan is already being enacted. For example, Thurston noted that Work Package 7 was implemented from November 2020, "*with the default interface language for Microsoft Office 365 changed from English to Welsh*" for learners in Welsh-medium schools **[5.5]**.

A further significant advancement of the Cardiff research and its impact was the release of the CorCenCC corpus **[3.7]** in November 2020. Following the project's British Council-funded public launch in February 2017, Knight's interview on *Radio Wales* was a springboard for attracting the public as crowd-sourced data-collectors and analysers (integral to the project design). This and similar engagement events have reached policy makers, educators, publishers and the media, and brought many thousands to the website (167,149 hits by 31/12/20) **[5.8]**. Welsh Government funding (£219,964) was awarded to develop open-source spin-off tools that bridge the corpus to learning and technological applications and thus improve machine learning and translation, and the use of Welsh in Artificial Intelligence. These include:

- Welsh language WordNet: a database of relationships between words and synonyms
- Stemmer: a program that identifies and removes word affixes to reveal the root
- Word and term embeddings: probabilistic information to improve the accuracy of how Welsh is interpreted by machines, for use in translation and speech-to-text technology.

CorCenCC and this satellite work fulfil two policy objectives of the Welsh Government: *"to capture Welsh as it is being written and spoken today"* and *"to release, under open licence, more Welsh language technology tools and resources"* **[5.9**, p.3**]**. The 2019 curriculum for Welsh for Adults stated that *"publication of this corpus is certain to have a heavy influence on future curriculum content"* **[5.10,** p.36**]**.

In summary, Cardiff University research in applied linguists made major contributions to Welsh language learning and use in Wales, through interdisciplinary collaborations that: established the current state of language learning and use practices; fed into policy; and developed new tools for learning and studying Welsh.

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5. Sources to corroborate the impact (indicative maximum of 10 references)

[5.1] Welsh Government, *Written Response to the Welsh for Adults Review Group Report 'Raising our Sights'*, November 2013 (Cardiff: Welsh Government)

[5.2] National Centre for Learning Welsh *Annual Report. 01.08.2017-31.07.2018.* Cardiff: Y Ganolfan Dysgu Cymraeg Genedlaethol)

[5.3] Testimonial: Helen Prosser, Director of Teaching and Learning at the National Centre for Learning Welsh

[5.4] a. First Minister response to Mentrau Iaith report, see the Record of Proceedings 25/03/2014 at 14.27 **b.** Welsh Government response to Mentrau Iaith Report and subsequent actions

[5.5] Testimonial: Richard Thurston MBE, Deputy Chief Social Research Officer Welsh Government

[5.6] 'National Policy on Welsh language transmission and usage in families', Welsh Government draft consultation document, February 2020

[5.7] Welsh-language Technology Action Plan (January 2018)

[5.8] Screenshot showing website visits to CorCenCC site by 31 December 2020

[5.9] *Cymraeg 2050: A Million Welsh Speakers* - Work Programme 2017-21, Welsh Government, 2017

[5.10] *National Curriculum for Welsh for Adults*, Welsh Government, 2019