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# Perceptions of linguistic parity on social media: a qualitative comparison between primary Cymraeg and English-medium secondary school pupils

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## ABSTRACT

This thematic analytic qualitative study used participants' oral narratives to examine primary *Cymraeg*, which is the Welsh language, and English-speaking adolescents' perceptions regarding *Cymraeg*-speakers' opportunities of using their primary language on social media. Twenty-three participants were interviewed (two Welsh/Bilingual-medium schools: males = 5, females = 6; two English-medium schools: males = 6, females = 6). All of the Welsh/Bilingual-medium participants were primary *Cymraeg*-speakers. Operating at the broad thematic level, both groups provided similar responses. However, inter-group variance might be inferred at the sub-thematic level where, for instance, *Cymraeg*-speakers identified a greater array of technical limitations preventing *Cymraeg*-speakers using *Cymraeg* within the social media domain. The potential consequences of an actual or perceptual linguistic imbalance on social media are discussed.

## ARTICLE HISTORY

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## KEYWORDS

Social media; Cymraeg

Extant research suggests a proportion of *Cymraeg*-speakers (*Cymraeg* is the Welsh language) generally use English on social media (Cunliffe, Morris, and Prys 2013), and whilst engaging in internet activities *per se* (McAllister, Blunt, and Prys 2013). Whilst there is a suggestion that *technical* constraints prevent minority language speakers from using their primary language (i.e. an individual's language of choice within the home) on social media (Cunliffe, Morris, and Prys 2013), an array of *non-technical* factors also inform minority language speakers' choice of language on social media. These considerations include others' languages, the use of English being considered more convenient, or not knowing many users on social media retaining an ability to communicate through the minority language (McAllister, Blunt, and Prys 2013). McAllister, Blunt, and Prys (2013) noted also how primary language speakers' restricted opportunity to use their primary language online might also be informed via a lack of awareness regarding the online channels accommodating their minority language. To appreciate *Cymraeg* within the digital context, it is first necessary to explore the history and vitality of *Cymraeg*. Please note that whilst *Cymraeg*-speakers also speak English, the term '*Cymraeg*-speakers' refers to individuals whose first language is *Cymraeg*.

*Cymraeg* is a minority language within its own country with only 28.5% (equating to 861,700 people) of people aged three and over retaining an ability to speak *Cymraeg* (Welsh Government 2021a). In terms of demographic distribution, the Welsh Government (2021a) indicated the greater concentration of *Cymraeg*-speakers are located in Carmarthenshire (90,600 speakers), Cardiff (89,700 speakers), and Gwynedd (89,200 speakers). Expressed as a percentage, the highest

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percentage of *Cymraeg*-speakers are in Gwynedd (75%) and the Isle of Anglesey (66%). The lowest percentage of *Cymraeg*-speakers are in Bridgend (17%) and Torfaen (17%).

Despite *Cymraeg* enjoying a relatively high level of prosperity with regard to the relative number of speakers, the history of *Cymraeg* relative to the majority language English is best described turbulent. Paradoxically, a State-sponsored nineteenth-century act of suppression supplies a hint regarding Wales' unique linguistic and social identity within the broader context of the British socio-political landscape (Thomas 1977). The Education Act of 1870 compelled *Cymraeg* primary schools to instruct their children in English only, and this was ruthlessly enforced: any child overheard speaking *Cymraeg* was forced to wear a wooden placard around his/her neck inscribed with the letters 'W.N.', which stood for 'Welsh Not' (Edwards 2005; Khleif 1976; Madoc-Jones and Buchanan 2004). The placard was a visible reminder of the language's reduced status. Implicitly, the practice of 'W.N.' suggested a division between the minority (*Cymraeg*) and majority (English) languages and their primary speakers, which underscored the inferiority of *Cymraeg* relative to English. Thus, the practice of 'W.N.' suggests a turbulent past for *Cymraeg*. Originating as a Celtic language spoken by the ancient Britons, *Cymraeg* has endured an undulating trajectory (Historic UK 2022): enjoying a degree of prosperity during the medieval period through the notable works of the poets Aneirin and Taliesin amongst others to the Middle Ages where famous manuscripts such as the *Mabinogion* were written in Middle Welsh, *Cymraeg* encountered its first major act of censure at the hands of Henry VIII's Act of Union in 1536 that drastically affected *Cymraeg*'s status as an administrative language; however, via theologians, *Cymraeg* survived. Further threats to *Cymraeg*'s vitality were witnessed during eighteenth-century Industrial Revolution where Wales received an influx of English-speakers. As the twentieth century progressed, there was a realization that *Cymraeg* and its speakers were being unfairly treated, and this gave rise to the recognition of *Cymraeg* within Wales' law courts. Thus, by slow degrees, the linguistic prejudices of the Tudor period were reversed and *Cymraeg* was once more spoken within the home, workplace, and school. Casting an eye toward the future there are indications suggesting a more prosperous *Cymraeg* existence; for instance, implicitly suggesting support at the highest political level, the Welsh Government's (2017) objective is to have one million *Cymraeg*-speakers by 2050. Further, minority and regional languages such as *Cymraeg* receive protection from the European Charter for Regional and or Minority Languages (2022), with the Charter being ratified by the United Kingdom. The chequered history of *Cymraeg* raises an important question about the strength of *Cymraeg* within the present socio-linguistic landscape, and this aspect is addressed below.

It has been suggested that *Cymraeg* demonstrates a moderate degree of ethno-linguistic vitality (Giles, Bourhis, and Taylor 1977); it is spoken by over one-quarter of the population of Wales (Welsh Government 2021a), receives support from regional and national governmental offices, industry, mass media, religious, and cultural institutions (Harwood, Giles, and Bourhis 1994; Giles, Bourhis, and Taylor 1977; Welsh Government 2021b; Yr Eglwys yng Nghymru 2021), and *Cymraeg*-speakers have attained a degree of institutional control (EURYDICE 2020; Harwood, Giles, and Bourhis 1994). However, despite *Cymraeg* representation on social media (Honeycutt and Cunliffe 2010; Keegan, Mato, and Ruru 2015), the extent of its active use on social media remains uncertain, and there exists a possibility of *Cymraeg* becoming digitally extinct (Welsh Government 2018).

Adopting a holistic vision with respect to *Cymraeg*'s social media representation with respect to other minority languages, Keegan, Mato, and Ruru's (2015) study suggested *Cymraeg* is similarly represented within the microblogging-oriented (i.e. short messages including no more than 140 characters) Twitter platform. Focusing primarily on the te reo Māori language, data analysis of the Indigenous Tweets website (launched in March 2011 with the express purpose of connecting Indigenous language speakers) suggested a Twitter presence for an array of Indigenous languages including Basque, Haitian Creole, Irish Gaelic, Frisian (Netherlands), Kapampangan (Philippines), etc. *Cymraeg* was similarly represented. When the various languages were ranked according to the quantity of people 'tweeting' per Indigenous language, *Cymraeg* consistently held a top-three position out of the twenty Indigenous languages surveyed.

Online usage of *Cymraeg* frequently entails the incorporation of English words (Cunliffe 2019; Cunliffe and Harries 2007), not all primary *Cymraeg*-speakers use *Cymraeg* on social media (Cunliffe, Morris, and Prys 2013; McAllister, Blunt, and Prys 2013), and bilinguals do not always take advantage of opportunities for online *Cymraeg* usage (Cunliffe 2019).

A reduced opportunity to use one's primary language on social media (whether imposed by technological restriction, opportunity, or a minority language speaker's perception) might set in motion a chain of undesirable psychological associations. Conceivably, the prospect of being 'forced' to use the majority language on social media, which constitutes an assimilative and submissive response mechanism (Crystal 2000), transmits a message suggesting society *per se* might not place a high value upon the minority language and associated culture, which ultimately diminishes a minority language speaker's level of self-esteem (Baker 1996; Brandt 1988). Self-esteem has been negatively associated with depression (Orth, Robins, and Roberts 2008; Orth et al. 2009), loneliness (Rosenberg 1965; McWhirter 1997), social anxiety (de Jong et al. 2012; Obeid et al. 2013), and social media dependency (Kuss and Griffiths 2011; Andreassen 2015). Concomitantly, *Cymraeg*-speaker believing opportunities to use *Cymraeg* on social media to be curtailed might be vulnerable to these psychological associations related to diminished levels of self-esteem, which would clearly be an undesirable and non-advantageous state-of-affairs.

However, there have been few, if any, studies focusing upon *Cymraeg*- and English-speakers' perceptions regarding the opportunities to use *Cymraeg* on social media, especially from a key group of young people in schools. The key point-of-interest is whether perceptual differences prevail between primary *Cymraeg*- and English-speaking participants regarding *Cymraeg* linguistic opportunities on social media. Thus, the objective of the present analysis is to test the following hypothesis: primary *Cymraeg*-speaking participants will perceive fewer opportunities to use *Cymraeg* on social media relative to primary English-speaking participants.

The latter part of the review examines *Cymraeg* in the social media context with respect to linguistic revitalization, digital obstacles with respect to revitalization, and how social media impacts contemporary adolescents' lives with regards self-esteem and identity construction.

The 'good news' is that initiatives are in motion to maintain and revitalize *Cymraeg* with regard to the on and offline worlds; for instance, implicitly suggesting support at the highest political level, the Welsh Government's (2017) objective is to reach one million *Cymraeg*-speakers by 2050. Encouragingly, the digital vitality of *Cymraeg* is further strengthened by the work of the University of South Wales' Hypermedia Research Group (Hypermedia Research Group 2022), which conducts 'research into the relationship between minority languages and information technology' with a specific emphasis placed upon *Cymraeg*. With numerous years' language technology experience, Bangor University remains proactive in the development of *Cymraeg* resources such as spelling and grammar checking applications, e-dictionaries, etc. (Cunliffe et al. 2022; Prys et al. 2021). However, despite the honest and noble intentions of the Welsh Government and esteemed academic institutions, practical problems remain, which conspire to curtail the digital unification of the *Cymraeg*-speaking collective; for instance, there is a recognition of access-related issues, which was an issue initially found by the then Welsh Assembly Government (2003) when they showed that resolution of the 'digital divide' would facilitate social inclusion via the on-line unification of *Cymraeg*-speaking communities. The passage of time, it would appear, has failed to resolve the access issue, since the Welsh Government's (2019) public consultation revealed the majority of respondents referenced poor mobile connectivity and broadband services within certain parts of Wales with the problem being more pronounced within the rural regions. One of the consultation's findings showed widespread public support for the Welsh Government's digital inclusion program *Digital Communities Wales*; however, there was a conviction that greater financial investment was needed to ensure every Welsh community enjoyed access to high-speed broadband connections (Welsh Government 2019). Resolution of the broadband and connectivity issues are important since research into online second-line acquisition would implicitly suggest the digital unification of disparate *Cymraeg*-speakers would realize tangible benefits regarding *Cymraeg*-speakers'

linguistic skills, motivation, and confidence (Kabilan, Ahmad, and Abidin 2010). The proliferation of mobile technology has enhanced *Cymraeg* learners' experiences; for instance, students experience a combination of formal and informal learning styles, studying from home, and taking advantage of micro-blogging to perfect their *Cymraeg* reading and writing skills (Jones 2015a; 2015b).

The digital unification of *Cymraeg*-speakers would suggest further benefits in terms of adolescent *Cymraeg*-speakers' well-being. Removal of perceived or actual barriers regarding *Cymraeg* usage on social media would suggest societal recognition of *Cymraeg*-speakers' first language, which would benefit *Cymraeg*-speakers in terms of their collective and individual levels of self-esteem (Baker 1996; Brandt 1988). The salience of adolescents' self-esteem is augmented given empirical analyses demonstrating self-esteem's negative association with an array of psychological variables such as depression, loneliness, and social anxiety, which were addressed previously. Extant research would suggest, therefore, enhanced opportunities of using *Cymraeg* on social media would benefit *Cymraeg*-speakers' well-being. This last point is potentially significant since empirical data would suggest adolescents are a demographic spending significant periods of time on social media (O'Keefe and Clarke-Pearson 2011; YouGov 2019; Internet Safety 101 2020). In addition to enhancing adolescent *Cymraeg*-speakers' well-being, extant analyses have shown how the use of immersive technologies such as social media facilitate adolescents' identity formation, also (Pempek, Yermolayeva, and Calvert 2009). Thus, initiatives enhancing *Cymraeg*-speakers' opportunities of using their first language on social media would benefit *Cymraeg*-speakers in many respects such as linguistic ability, sense of self-esteem (and related psychological associations), and identity formation.

## Method

### Participants

Inclusion criteria were that participants must: attend a Welsh/Bilingual- or English-medium secondary school in Wales; be aged 12–15 years; and have read, understood, signed, and dated the consent form. Exclusion criteria were that the participant declined participation; withdrew during questionnaire completion; or the participant's school elected to withdraw from the research. Twenty-three pupils volunteered to take part in the interviews: there were 5 males and 6 females from Welsh/Bilingual-medium schools who were all primary *Cymraeg*-speakers; and 6 males and 6 females from English-medium schools who were primary English-speakers. The mean age for the Welsh/Bilingual- and English-medium interviewees was 15 years. Four schools (two Welsh/Bilingual- and two English-medium) agreed to take part. The schools were located within South Wales and were randomly selected using a random number generator (RANDOM.ORG 2020).

### Procedure

At the request of each school, participants were predominantly interviewed in pairs. Participants' teachers were not present during the interviews. All interviews were facilitated by the researcher. Prior to each interview, participants received assurances regarding anonymity, the freedom to decline a response to any question, and the option of withdrawing from the interview at any time of their choosing without having to provide a reason. Encouraging an open response, the comparative question presented to Welsh/Bilingual- and English-medium school participants was identically worded: *Does social media provide enough opportunities to communicate using Welsh?* All interviews were conducted through the medium of English with no translations.

In accordance with Oppenheim (1992), the interviewees were presented with an identically worded question (please see the previous paragraph) in order to attain the same level of meaning and understanding within interviewees' minds. As observed by the latter author, attainment of true and equal understanding within all interviewees' is unrealistic, but the pursuit of this

ideal is the goal and avoidance of interviewer bias is the objective. The ultimate objective, therefore, was the attainment of data that was free of contamination through the interview process. Thus, the interview objective was to standardize the interview process across all interviews whilst simultaneously responding to interviewees' words in an objective and non-influential manner, as recommended by Oppenheim (1992). However, acknowledging interviewees' different personalities and personal circumstances, the application of a pre-determined 'perfect' and equal template across all interviews was unrealistic (Banister et al. 1999). Thus, the interviewer's position per interview was to impart an objective facilitative role wherein interviewees were at liberty to express their views freely.

### **Analytic design**

The design adopts a primarily deductive method. The supportive rationale is predicated on the basis that the research question proceeded from a hypothesis that was informed by empirical analyses. The deductive approach was subjected to the six-step thematic analytic design proposed by Braun and Clarke (2006), which has been widely used (Crompton et al. 2020; Tambling et al. 2021; Xu and Zammit 2020). The applied six-step process addressed the following in strict chronological order (Braun and Clarke 2006).

### **Data familiarization**

Interviews were digitally recorded using a Phillips DVT2510 Voice Tracker Audio Recorder with Dragon Naturally Speaking software and were fully transcribed. The dual process of transcription and re-reading of transcripts afforded a higher degree of textual familiarity.

### **Generation of initial codes**

Codes were non-numerical in orientation. Coding was undertaken by a single person and checked by the co-authors. The deployed codes were brief textual descriptions, referencing related concepts embedded within participants' quotations, e.g. with respect to *Cymraeg*-speakers, some of the identified concepts were: '*Cymraeg* is a minor language', '*Cymraeg* language is growing', etc. Whilst there is no strict rule regarding coding, consistency of application across the entirety of the data set was sought, in that an identified code might relate to a single word or multiple words. Code descriptors (i.e. code names) were conceptual in nature, i.e. free of researcher interpretation.

### **Searching for themes**

Having identified the various codes, the next step entailed the collation of related codes into designated themes. Pursuing the *Cymraeg*-speaker example referenced during the initial generation of codes, above, the codes: '*Cymraeg* is a minor language', '*Cymraeg* language is growing', and '*Cymraeg* language had died a bit', comprised a theme entitled 'Perception of the *Cymraeg* language'. Mind maps were deployed to better identify and demarcate themes and codes from one another. In one instance, one of the identified codes warranted the creation of sub-codes.

### **Reviewing themes**

Having established an initial set of themes, the next step in the process entailed a review of the themes, to determine whether they 'fitted' the data, codes, and themes *per se*. As per Braun and Clarke (2006), a two-step process was enacted. First, data was examined to determine whether the themes accurately reflected the transcribed data. Second, the mind maps were reviewed to provide assurance the themes also reflected the over-arching themes of the data.

### **Defining and naming themes**

As a process of continual refinement, this stage essentially formed the 'story' of the participants' quotations. Pursuing the *Cymraeg*-speaker example, illustrated during initial code generation, the theme



'Perception of the *Cymraeg* language' (accommodating the identified three codes), attracted an over-arching definition indicating the theme's codes collectively reflected the participants' belief regarding the vitality and future prospects of the *Cymraeg* language.

**Producing the report**

Whilst quantitative analyses might employ *p*-values, for instance, to prove or disprove a hypothesis, qualitative analysis must rely upon rather more subjective evaluations. To demonstrate support for the tested hypothesis, reliance was made upon participants' quotations. Where available, the literature was employed to clarify and explain findings.

**Results**

Figures 1 and 2 present the mind maps (accommodating themes and related codes – including one sub-code), and Tables 1 and 2 provide an explanation for each identified theme. The results from the *Cymraeg*-speaking participants are shown in Figure 1 and Table 1, and those from the English-speaking participants are shown in Figure 2 and Table 2.

The thematic analytical approach revealed five broad themes for *Cymraeg*-speaking pupils (Figure 1 and Table 1), these being: technological limitations, difficulty locating *Cymraeg* on social media, linguistic preferences, perception of *Cymraeg*, and few opportunities.

There were four broad themes reported by English-speaking participants (Figure 2 and Table 2), these being technological limitations, difficulty locating *Cymraeg* on social media, linguistic preference, and opportunities available.

Three of the themes, technological limitations, difficulty locating *Cymraeg* on social media, and linguistic preference, were repeated for both groups. However, despite the broad thematic similarity, the groups differed with regard to certain sub-codes. Moreover, whereas the *Cymraeg*-speaking participants reported experiencing few opportunities to use *Cymraeg* on social media, the English-speaking participants suggested that they believed there were opportunities available. [Note: within the interview extracts, 'W' denotes a *Cymraeg*-speaker, and 'E' denotes an English-speaker.]

**Technological limitations**

Emerging as the dominant theme amidst the *Cymraeg*-speaking cohort, and to a lesser extent amidst the English-speaking cohort, participants' responses referenced social media's inability to adequately

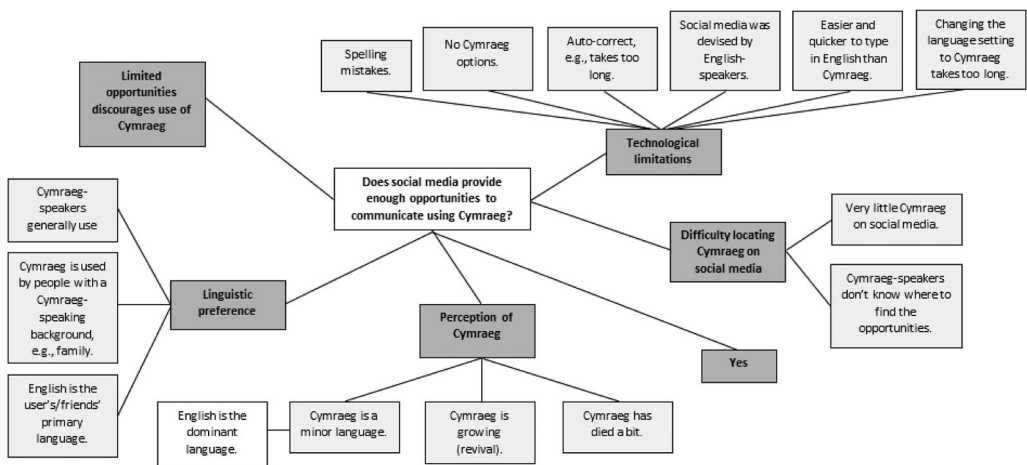


Figure 1. *Cymraeg*-speakers' mind map.

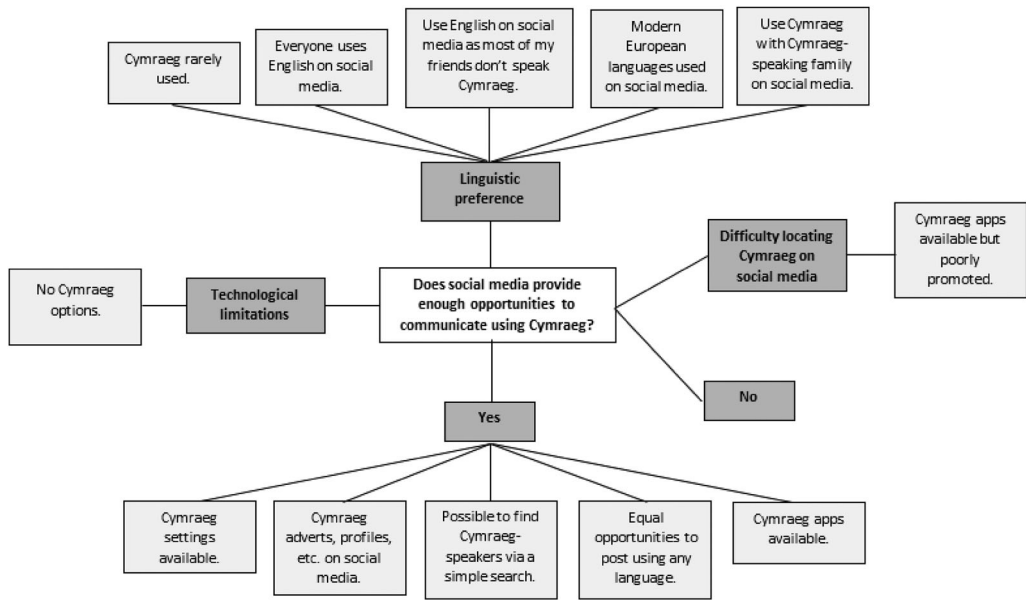


Figure 2. English-speakers’ mind map.

host and support the usage of *Cymraeg* acted as a deterrent for *Cymraeg*-speakers to use *Cymraeg* on social media in any meaningful way. Participants’ responses, for instance, suggested a dearth of *Cymraeg* options on social media: ‘I don’t think you can really set your language on your phone to Welsh. If you did, I reckon more people would speak more Welsh on social media’ (W8); ‘There’s no option to choose the Welsh language’ (W9); ‘On Facebook, we don’t have the option to have everything in Welsh’ (E4); ‘... there’s no option to kind of change the language to Welsh if you want’ (E3).

Alluding to the linguistic emphasis of social media’s original software engineers, one participant suggested an absence of *Cymraeg* linguistic influence at the conception stage: ‘The people that made social media are probably English and I don’t think any of them are Welsh, so they probably, basically, just made them in English so there isn’t a way to make them Welsh’ (W4).

Numerous participants’ responses referenced the practical difficulties of using *Cymraeg* within social media, such as issues regarding the correct spelling of *Cymraeg* words: ‘... it’s kind of

Table 1. *Cymraeg*-speakers’ themes, sub-themes, and explanations.

Themes	Sub-themes (Codes)	Explanation
Perception of <i>Cymraeg</i>	<i>Cymraeg</i> is a minor language. <i>Cymraeg</i> is growing (revival). <i>Cymraeg</i> has died a bit.	Belief regarding the vitality and future prospects of <i>Cymraeg</i> varies.
Linguistic preference	<i>Cymraeg</i> -speakers generally use English. <i>Cymraeg</i> is used by people with a <i>Cymraeg</i> -speaking background. English is used by self/friends.	<i>Cymraeg</i> -speakers do not invariably use <i>Cymraeg</i> .
Few opportunities (compared to English)	Lack of <i>Cymraeg</i> discourages use of <i>Cymraeg</i> outside school.	Limited opportunity discourages <i>Cymraeg</i> usage.
Technological limitations	Spelling mistakes, auto correct, etc. No <i>Cymraeg</i> options. Social media devised by English-speakers. Easier and quicker to use English. Changing the language setting takes too long.	Implication is that <i>Cymraeg</i> usage is curtailed due to technical limitations and not necessarily personal choice.
Difficulty locating Welsh on social media	Very little <i>Cymraeg</i> on social media. <i>Cymraeg</i> -speakers do not know where to find opportunities.	Implication is that the <i>Cymraeg</i> is poorly represented and promoted on social media.



**Table 2.** English-speakers' themes, sub-themes, and explanations.

Themes	Sub-themes (Codes)	Explanation
Yes – opportunities available	<i>Cymraeg</i> settings available. <i>Cymraeg</i> adverts, profiles, etc. Possible to find <i>Cymraeg</i> -speakers via a simple search. Equal opportunities for all languages. <i>Cymraeg</i> apps available.	Implication is that opportunities are available to <i>Cymraeg</i> -speakers on social media.
Technological limitations	No <i>Cymraeg</i> options.	Implication is that <i>Cymraeg</i> usage is curtailed due to technical limitations and not necessarily personal choice.
Linguistic preference	<i>Cymraeg</i> rarely used. Everyone uses English on social media. Use English – friends do not speak <i>Cymraeg</i> . Modern European languages used on social media. Use <i>Cymraeg</i> with <i>Cymraeg</i> -speaking family.	English and modern European languages are used mostly.
Difficulty locating <i>Cymraeg</i> on social media	<i>Cymraeg</i> apps available but poorly promoted.	Implication is that <i>Cymraeg</i> is poorly promoted on social media.

harder to do especially with like spelling is a big part of it. With auto-correct it takes about five minutes to type a single sentence' (W3); 'There are websites and all sorts in Welsh but it's just that maybe sometimes there might be spelling mistakes' (W8).

The auto-correct feature within social media applications received criticism, as indicated by W3, above, which is an assertion shared by another participant: 'To start off with, you've got auto-correct: I can't text my friends something in Welsh because it will auto-correct to something completely different. So, I don't bother' (W10). Changing language settings also received criticism: '... it takes you a while to have to change the language ...' (W6).

### **Difficulty locating *Cymraeg* on social media**

Although a greater proportion of *Cymraeg*-speaking participants referenced the difficulties associated with locating *Cymraeg* text on social media, this was an issue shared by both groups. Fundamentally, a core concern suggested *Cymraeg per se* was poorly represented on social media: '... there's not really a lot of Welsh elements on social media ... There's not enough on there to encourage people to use Welsh outside school on social media, so people just don't bother to do it' (W3); 'The only Welsh I see is from the school page' (W9).

Suggesting there are opportunities for *Cymraeg*-speakers on social media, one of the English-speaking participants suggested the key issue related to the inadequate promotion of *Cymraeg* opportunities: 'Yes, there are a few different apps that you can use different languages, but it's not promoted enough on, like, social media and stuff to [make] people want to learn Welsh and different languages' (E7). Extending from E7's observation, above, the difficulty associated with locating *Cymraeg* opportunities within social media was similarly identified: 'I think there [are] enough opportunities but people just don't know they are there' (W9); '... people don't know it's there' (W8).

### **Linguistic preference**

The linguistic preference theme featured strongly during *Cymraeg*- and English-speakers' interviews. Inter-group consensus is suggested wherein participants within both linguistic settings suggested *Cymraeg*-speakers generally used English: 'I do think people speak English more on-line even if they do speak Welsh' (W1); '... most people don't bother speaking Welsh even though they go to a Welsh school ...' (W4); '... you don't normally speak Welsh when you're texting; it's always English' (W5); '... people mainly talk in English or in [a] different language' (E1); '... the main language is English. Everyone uses English on-line' (E12).

However, there was recognition that *Cymraeg* might be used when communicating with *Cymraeg*-speaking family members or where the speaker retains a particularly strong *Cymraeg* emphasis: 'I think the only reason that people use Welsh is if they are a very Welsh person or if their family is Welsh ...' (W4);

Like my grandma speaks Welsh and so does my mum – so I speak quite a lot of Welsh at home, and I would message them on Instagram, or something, in Welsh. So, I would talk to them in Welsh on Instagram. (E6)

Suggesting friends' primary language influenced choice of language used on-line, participants within both groups, accordingly, attained a degree of consensus: 'Most of my friends are outside school anyway and don't speak Welsh' (W10); 'I don't speak much Welsh on-line ... social media because I don't have many only-speaking Welsh friends' (E5).

Demonstrating a macro-linguistic vision, one of the English-speaking participants, whilst indicating that perhaps *Cymraeg* might be considered less popular within the on-line domain, recognized the widespread popularity of not just English but, also, some of the more prominent European languages: 'Obviously, German – the more modern foreign languages like French, German, Spanish, but not Welsh' (E4).

### ***Few opportunities discourages use of Welsh***

Suggesting limited *Cymraeg* on-line linguistic opportunities, one Welsh-speaking participant's response indicated a lack of opportunity rather quelled *Cymraeg*-speakers' enthusiasm to use the language on social media: 'There's not enough on there to encourage people to use Welsh outside school on social media, so people just don't bother to do it' (W3).

For the most part, the perception that sufficient *Cymraeg* social media opportunities exist was principally demonstrated by English-speaking participants' responses, with only a couple of the *Cymraeg*-speaking participants sharing the same belief. The below extracts communicate a perceptual belief regarding the availability of language settings, apps, and opportunities: 'You can have settings where you can change it yourself ...' (E8); 'There are, like, Twitter accounts in the medium of Welsh, Instagram in Welsh' (W1); 'I think there might be something on Instagram' (W3); 'Yes, I think there are equal opportunities to everyone on-line because you can post or speak in whatever language you wish to' (E2).

### ***Perception of Cymraeg***

Inspecting responses from the *Cymraeg*-speaking cohort, participants presented an array of sub-themes. The more salient sub-theme suggested *Cymraeg* was a minor language, with English being the more dominant. The inference was that *Cymraeg* is less active within the social media context. In this sense, *Cymraeg* within the social media domain is considered the lesser language relative to English: 'If you scrolled five times, you'd see English written all over it' (W8); '... I haven't seen anything from anybody else speaking the Welsh language – only the English' (W9); '... I don't see any Welsh on social media at all' (W7).

Reflecting upon *Cymraeg* within a world-wide context, one participant simultaneously suggested, whilst there appears to be a *Cymraeg* revival, it remains a relatively unpopular language:

Don't get me wrong, Wales – the Welsh language – is growing but compared to like the whole world it's not that popular a language ... compared to English especially. So, I think that you're not really going to see a lot of it on social media. (W7)

Another participant, whilst recognizing the dearth of *Cymraeg* on social media, simultaneously suggested linguistic death and revival: 'You'd probably see every language apart from Welsh because Welsh has died off a bit. But now we're trying to get it back ...' (W8).

## Discussion

Driven by empirical research and the devised hypothesis, the execution of Braun and Clarke's (2006) six-step process unearthed an array of themes and related sub-themes (i.e. codes) for *Cymraeg*- and English-speaking participants in respect to the research question, above. Many of the themes resonated with the empirically referenced analyses, above. Operating from a broad thematic perspective there was an over-arching similarity between both groups – although they differed with respect to many of the sub-themes. Simultaneously, participants' responses upheld certain empirical propositions whereas others appeared to be contradicted.

Reflecting upon participants' perceptions of *Cymraeg* within the social media domain, *Cymraeg*-speaking participants' extracts suggested that English was the dominant language relative to *Cymraeg* (which should come as no surprise given the relative numbers of English- and *Cymraeg*-speakers, respectively, within the social media domain *per se*) and that *Cymraeg* was poorly represented, which runs contrary to Honeycutt and Cunliffe (2010; Keegan, Mato, and Ruru 2015) who suggested social network sites created opportunities for people to communicate in *Cymraeg*. Whilst a perception of under-representation might not equate with actual diminution of the language, conceptually such a belief entertains the possibility of *Cymraeg* becoming digitally endangered, an assertion that has received attention at the political level (Welsh Government 2018). Despite a perception of *Cymraeg* being poorly represented within the social media context, there was a recognition of a *Cymraeg* revival, which appears to resonate with the Welsh Government's target of achieving approximately one million *Cymraeg*-speakers by 2050 (Welsh Government 2017).

Related to the above sub-theme, an additional sub-theme, which is common to both groups, was the belief that most *Cymraeg*-speakers used English on social media, which aligns with empirical analysis. Participants' belief that *Cymraeg*-speakers generally used English on social media resonates with Cunliffe, Morris, and Prys (2013) who suggested 39.8%, 30.1%, and 30.1% of first language *Cymraeg*-speakers used English, a mix of English and *Cymraeg*, or all *Cymraeg* on Facebook, respectively. Although the scope of their study accommodated a broader array of on-line components (including social media), participants' perceptions regarding online language used comply with McAllister, Blunt, and Prys (2013), also. Accepting the proposition that a proportion of primary *Cymraeg*-speakers switched to English on social media encouraged the application of Crystal's (2000) assimilation theory, which conceivably transmitted a self-esteem reducing message suggesting societal devaluation of *Cymraeg* and the associated culture (Baker 1996; Brandt 1988). By way of partial explanation, a couple of the participants suggested *Cymraeg*-speakers' usage of *Cymraeg* on social media might be influenced according to the primary language used by family and friends, which is an argument paralleling Cunliffe, Morris, and Prys (2013) proposition. This raised the interesting issue regarding an end user's intended audience. *Cymraeg*-speakers' ability to communicate in English provided them with a choice of language to use online; for instance, when constructing and maintaining personal profiles (Cunliffe, Morris, and Prys 2013). Their choice, though, would appear to be influenced by a combination of conscious and subconscious factors such as the language spoken by the target audience. The target audience influence has been identified with respect to Twitter, also, whereby bilingual *Cymraeg*-English 'tweeters' used *Cymraeg* when communicating with fellow bilinguals; but switched to English when their tweets were not directed toward a specific user (Nguyen, Trieschnigg, and Cornips 2015). In this respect, it might be observed how *Cymraeg*-speakers' qualitative text paralleled extant research. Potentially negating the Welsh Government's one million *Cymraeg*-speakers by 2050 objective (Welsh Government 2017), an assertion presented by one *Cymraeg*-speaking participant suggested a lack of opportunity to use *Cymraeg* on social media acted as a deterrent against *Cymraeg* usage.

Predominantly expressed by *Cymraeg*-speaking participants, in an apparent contradiction with extant research suggesting few technical constraints prevented *Cymraeg*-speakers from using *Cymraeg* on social media (Cunliffe, Morris, and Prys 2013), participants' words suggest an array of technical limitations conspired to discourage the use of *Cymraeg* on social media; for instance,

participants suggested there were *few* or *no* options enabling *Cymraeg*-speakers to choose *Cymraeg* within social media. Contradicting the latter participants' assertion, a proportion of the participants suggested that options *were* available. The perceptual distinction might, for instance, be attributed to the poor promotion of *Cymraeg* and associated opportunities on social media, which is an issue raised by some of the participants. Promotion – or a lack thereof notwithstanding, additional technical constraints were articulated. One of the identified sub-themes related to the spelling of *Cymraeg* words on social media, with the suggestion that *Cymraeg*-speakers' usage of *Cymraeg* on social media became fraught with delay. The auto-correct feature on social media and time taken to adjust linguistic settings also received criticism.

Implicitly related to the *Cymraeg* promotion issue identified above, a couple of the *Cymraeg*-speaking participants expressed difficulty in locating *Cymraeg* on social media. Relatedly, whilst suggesting social media opportunities existed for *Cymraeg*, an English-speaking participant indicated that perhaps the poor promotion of *Cymraeg* opportunities on social media rather conspired against people's usage of *Cymraeg*. Indeed, the difficulty in locating *Cymraeg* on social media was a repeated sub-theme. Whilst only a couple of the *Cymraeg*-speaking participants suggested *Cymraeg* social media opportunities existed, a greater proportion of the English-speaking participants indicated likewise, which might suggest a perceptual distinction between *Cymraeg*- and English-speaking participants *per se* regarding *Cymraeg* social media opportunities. Suggesting the prevalence of social media opportunities, articulated sub-themes suggested the existence of *Cymraeg* settings, availability of *Cymraeg*-friendly apps, and capability of running routine searches to locate fellow *Cymraeg*-speakers.

Upon reflection, that perceived technological constraints conspired against practical usage of *Cymraeg* on social media cannot be denied – based upon participants' extracts and perceptions. Additionally, the poor promotion of *Cymraeg* social media opportunities appeared to hamper *Cymraeg* social media practice. Participants' words also suggested *Cymraeg* and English enjoyed an imbalance with regard to social media dominance; that is, there appeared to be a perceptually constructed linguistic disequilibrium within the social media sphere. The *perceptual* reference is of potential significance since if *Cymraeg*-speakers *believed* there are few opportunities to use *Cymraeg* on social media and, additionally, *believed* English is the main language, they would be less inclined to use *Cymraeg*, thereby upholding the *Cymraeg*-English linguistic imbalance perception. *Cymraeg*-speakers' perceptions, however, would appear to run contrary to reality, which suggested *Cymraeg*-speakers' opportunities to use *Cymraeg* on social media are real (Honeycutt and Cunliffe 2010; Keegan, Mato, and Ruru 2015). This would further suggest that *Cymraeg* would benefit from better promotion regarding social media opportunities, which is a point raised in the previous paragraph. Paralleling McAllister, Blunt, and Prys (2013) non-technical barriers, participants' references to others' languages determining the language spoken on social media suggests non-technical factors also influenced the choice of language used on social media.

Returning to the hypothesis, which stated *Cymraeg*-speaking participants perceived fewer opportunities to use *Cymraeg* on social media relative to English-speaking participants, the case for and against might be presented. Operating at the broad thematic level, the similarity of theme certainly materialized; for instance, participants within both groups recognized a difficulty in locating *Cymraeg* on social media. However, inter-group variance might be inferred at the sub-thematic level; for instance, whilst both groups identified technological limitations associated with *Cymraeg* usage on social media, *Cymraeg*-speaking participants' broader array of sub-themes set them apart from their English-speaking counterparts who presented only one theme.

Castig eye toward the future, based upon *Cymraeg*-speaking participants' words, it is clear that initiatives designed to promote *Cymraeg* usage on social media are required. The two prominent areas requiring resolution would be technological barriers to using *Cymraeg* on social media and the inadequate promotion of *Cymraeg* opportunities on social media. The *Cymraeg*-speaking community incorporating *Cymraeg*-speakers, formal and informal *Cymraeg* language-oriented organizations ought to work as one in a collective effort to promote the *Cymraeg* language within the

social media domain. In this regard, Welsh/bilingual-medium schools might be employed as *Cymraeg* language online conduits for greater *Cymraeg* usage on social media and other online outlets. Perhaps the Welsh Government might oversee and baseline such an initiative, which would prove commensurate to their one million *Cymraeg*-speakers by 2050 ambition (Welsh Government 2017).

Operating from a practical perspective, *Cymraeg*-speakers' narratives conveyed a degree of frustration regarding the difficulties of actively using *Cymraeg* on social media; for instance, the reported inaccuracy of auto-correct. In this regard, there exists an onus of responsibility upon the social media providers to improve their applications in order to adequately host minority and majority languages alike. Whilst social media providers might consider such an initiative both technically and financially non-conductive, from an ethnolinguistic vitality perspective (Giles, Bourhis, and Taylor 1977), the results might prove profitable. One cost-saving method social media providers could adopt would be to 'borrow' resources utilized by the better-resourced majority languages, which is a concept recognized by Cunliffe et al. (2022). From a social media developmental perspective, this 'borrowing' concept offers a glimpse of how extant majority language technology and associated applications might be deployed to the benefit of minority languages such as *Cymraeg* at a relatively low cost. From the developers' perspective, the reduced development costs associated with the 'borrowing' concept would remove in part one of the major obstacles currently discouraging major social media providers' whole-hearted engagement with minority languages.

This study is not without its limitations. Whilst present analysis employed twenty-three participants and, accordingly, afforded a glimpse of contemporary adolescents' perceptions, future studies would be encouraged to utilize a larger cohort. Accordingly, any attempt to generalize present findings ought to be *caveated* with this limitation. A further limitation is that the surveyed schools were located within South Wales. Concomitantly, it is observed how the language profiles between North and South Wales contrast with one another. Future studies would be encouraged to canvass an equal proportion of *Cymraeg*-speakers located within both geographic regions.

In summary, a case might be presented suggesting response similarity between both groups, refuting the hypothesis. Conversely, reflection upon the sub-themes, especially with respect to perceived technological limitations, encouraged the belief that *Cymraeg*-speaking participants perceived a greater array of obstacles preventing *Cymraeg* usage on social media.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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