Research challenges in informal social networked language learning communities

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How does the design of social networked language learning communities have an impact on the way evidence based research is conducted? This paper critically examines the degree to which the design of data accessibility and data ownership impact the research activity and the challenges faced by researchers who take these communities as object of analysis. To illustrate these challenges, I take as example web 2.0 language learning communities, the most well-known being Babbel, Busuu and Livemocha, among all possible types of informal, social network based language learning. This study illustrates the tension between on the one hand, the need for a more evidence based understanding of the under-explored field of informal social network based learning, and on the other hand, the obstacles to this scientific exercise. Finally, I discuss how this tension is situated in the current landscape of global research activity that calls for more open, transparent and participatory structures for data sharing and collaborative research.

Tags

social media; language learning; informal learning; collaborative learning

Very little is understood about the ethical implications underpinning the Big Data phenomenon. Should some-one be included as a part of a large aggregate of data? What if someone's 'public' blog post is taken out of con-text and analyzed in a way that the author never imagined? What does it mean for someone to be spotlighted or to be analyzed without knowing it? Who is responsible for making certain that individuals and communities are not hurt by the research process? What does informed consent look like?

(Boyd & Crawford, 2012: 672)

1. Online language learning exchange in formal and informal settings

Online exchange as communicative practice for the development of foreign language (L2) skills, also known as Telecollaboration (Belz & Müller–Hartmann, 2003), has been a trend in Computer Assisted Language Learning (CALL) studies in recent decades. Either in the form of peer (learner-learner) interaction or in the form of teacher-learner interaction, online interaction aiming at the development of language learning skills serves to "engage learners in online collaborative project work as an authentic and effective way of preparing learners for the complex (…) experience of foreign language and culture learning (O'Dowd, 2007, p.3). Internet technologies are considered as a turning point in the growth of telecollaboration by the variety of interaction and collaboration tools, both synchronous and asynchronous, offered to remote participants.

The framework within which telecollaboration happens is essentially a teacher-initiated framework within which online exchange is designed as part of a formal learning setting (often within a higher university context[1]). The telecollaborative exchange occurs between two or more groups of remotely located users (learners or teachers), with a pre-defined set of technologies and within a relatively secure frame of interaction, with teachers acting as "guides on the side", or adopting a more prominent role, that Helm & Guth claim to be very much in line with the type of Overt Instruction advocated by the New London Group, according to which "conscious awareness and control over what is being learned" is exercised (Helm & Guth, 2010, p.95). Regardless of the existence (or absence) of accreditation systems and methods, telecollaborative practice is defined by the institutional framework of the participating institution, and is therefore dependent on the components of the formal learning context it belongs to, such as academic calendars, curricula and lesson plans, and certification methods (for a detailed discussion see O'Dowd & Ritter, 2006). Moreover, it is situated in the language learning culture specific to the institutions involved in the telecollaboration, including the use of technologies and the associated "cultures-of-use" of these tools (Thorne, 2003).

In contrast, informal learning "includes all learning that occurs outside the curriculum of formal and non-formal educational institutions and programs" (Schuguresky, 2000: 1), thus "the word 'learning' [is deliberately used] and not (the word) 'education', because in the processes of informal learning there are no educational institutions, institutionally authorized instructors or prescribed curricula" (ibid, p.2).

As Vavoula (2007) argues in her study on informal ICT-based learning, "the biggest challenge for the [informal] learning researcher lies in capturing and understanding the context of the [informal] learning experience and how it interleaves with the learner's life context" (p.7). The author establishes five parameters as a basis for comparison of ICT-based formal and informal learning contexts. These parameters are: a) the location of learning and the layout of the space (where); b) the social setting (who, with whom, from whom); c) the learning objectives and outcomes (why and what); d) the learning method(s) and activities (how); and e) the learning tools (how).

As these crucial parameters change radically between a formal and an informal learning context, Vavoula claims (ibid; p.8) that "moving away from 'fixed', traditional classroom learning into more diffused, informal, mobile situations, the learning context becomes vaguer and harder to establish and document for the researcher". This situation becomes more complex in the context of "volatile" Internet technologies in the form of social media,[2] as I discuss in the next section.

2. Social network based informal language learning exchange and User Generated Content

Internet developments in the form of social media, defined as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, which allows the creation and exchange of user-generated content" (UGC) (Kaplan and Haenlein, 2010: 61) offer new possibilities for user-initiated language learning practice. Some of them are addressed by CALL researchers in books or journal issues (Thomas et al., 2013; Guth & Helm, 2010; Ollivier & Puren, 2013; Demaizière & Zourou, 2012; Lamy & Zourou, 2013). The opportunities given to users to create, distribute, share and manipulate different types of content, most of them publicly accessible, make UGC a landmark of social networking technologies. A largely cited OECD study (OECD, 2007) identifies criteria that indicate what UGC is and what it is not, while UGC can be defined as "creation [of content] outside of professional routines and practices" (p.8). The creation, sharing and re-use of UGC within web 2.0 language learning communities will be analyzed from the viewpoints of the legal framework governing them and the way in which this framework affords the development and re-use of UGC in other contexts (section 5).

From a research perspective, the emergence of spaces where learners self-organize themselves in informal ways of learning supported by social networking technologies, co-create, use and re-mix content (Pegrum, 2011) is a promising field of analysis. CALL scholars are expected to deal with learning practice that occurs through a non-predefined set of social media, with any user, with no clear definition of learning goals and in an unspecified timeframe. This is in sharp contrast to research

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[1] See for instance the INTENT European project http://www.intent-project.eu/

[2] With the aim of simplification, the terms 'social media' and 'social networking technologies' are used interchangeably, although slight conceptual differences exist (also discussed in Zourou, 2012).

on teacher-initiated, institutionally-framed telecollaboration settings.

Naturally the new socio-technical developments question the suitability of existing conceptual and methodological frameworks for the understanding of a new CALL reality (for a discussion see Lamy, 2013).

3. Scope and methodology

Among types of informal, social networked based language learning, this paper focuses on web 2.0 language learning communities, the best known being Babbel (7 million users), Busuu (10 million users) and Livemocha (over 10 million users, all data June 2013). Learning in these communities is not totally without bounds, and choices in respect of online activity (user roles, provision of materials and tasks, interaction tools, codes of conduct, expected user attitudes) have been made by the community administrators. However they can be taken as an example of the situations CALL researchers face in their attempts to understand the dynamic nature of informal learning practice in user-initiated social networking spaces.

Several studies have been produced (section 4.3) although the field remains largely underexplored. Briefly, [Web 2.0] language learning communities run on specially designed "platforms" (in the technical sense, set up by software developers) and "learning materials in several languages are accompanied by structured learning pathways" (Zourou, 2012, np). Some authors (Liu et al., 2013, Gruba & Clark, 2013, Harrison, 2013) opt for the term SNSLL (Social Networking Sites for Language Learning) to emphasize their similarities with mainstream SNS.

Regarding the meaning of the term "data" in this paper, it pertains to personal data (data on a user profile, such as country, languages spoken and learnt, age, etc.) as well as to UGC, understood as content created by users within the framework of each community, enhanced by the design of the communities that encourage the creation and sharing of UGC, such as the creation of flashcards and quizzes, translation of texts in user's mother tongue, feedback to peers who learn a user's mother tongue, etc. UGC differs from pedagogical content as the latter is delivered to the users by the community administrators (learning materials in the form of oral and/or written input, exercises, etc.), often within an agreement with a professional content provider, such as Collins and Pons (for Busuu).[3]

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[3] Changes in Livemocha's structure are expected since it was acquired by Rosetta Stone in April 2013 http://Livemocha.com/pages/press/

The distinction between content delivered by the community and UGC is useful in the discussion of data property rights in the communities under scrutiny (see next section).

The scope of this paper is to investigate how and to what extent the community design choices regarding data ownership and accessibility affect CALL research in web 2.0 language learning communities, and what the implications are for research in ICT-based informal learning in general. The paper addresses the following questions:

1. Who owns user data in these communities?

2. How accessible is user data for CALL research?

3. What are the consequences of data ownership and accessibility for research purposes?

From a methodological viewpoint, the terms and conditions of the three communities are examined from a discourse analytical perspective in order to explore the way community administrators approach data accessibility and ownership, thus the way communities are designed to afford data analysis for research purposes. Secondly, a critical review of the studies carried out on web 2.0 language learning communities is examined as an illustration of the impact of actual levels of data ownership and accessibility on scientific research.

4. Analysis

4.1. Data ownership and property rights

When we look into data ownership we first notice that before registering, every user in any community has to accept the Terms and Conditions. This agreement governs activity between the user and the community administrators. The term "community administrators" refers to the team that manages the community. From an organizational point of view, these language learning communities are privately owned companies, which are often web 2.0 start-ups, as shown in the publicly available press releases in each community website.

Table 1 indicates who owns UGC (column 1), the entity to whom UGC property rights belong (column 2) and the entity holding property rights after the termination of the agreement by the user, should the user leave the community.

	Ownership of user generated content	Property rights	Property rights in the case of agreement terminated by the user
Babbel	(not mentioned)	The user and the community	The community
Busuu	The user	The community	The community
Livemocha	The user	The user and the community	The community

Table 1: ownership and property rights as reflected in the terms and conditions of each community

An interpretation of table 1 data is that in all communities the user retains rights to the content that he or she creates (column 1). For instance, in Busuu terms, "busuu.com does not claim ownership of the Content [a user] place[s] on [his/her] profile" (point 6, content). The same applies to Livemocha ("you retain all rights in your User Content", point 18). Babbel does not explicitly mention ownership of its users' data. However, the user agrees to grant the community the right to use this content (column 2, table 1). More precisely, at the registration stage the user gives permission to the community to "reproduce, modify, adapt and publish" (Babbel, point 12.1 and 12.2) part or all of his/her user-generated content. The same applies to Busuu (point 6: "you grant busuu.com a world-wide, royalty-free, and non-exclusive license to reproduce, modify, adapt and publish the Content", with content defined as "all information, data, text, software, music, sound, photographs, graphics, video, messages, tags or other materials" (point 6), and to Livemocha (point 18).

In the case where a user decides to leave the community based on his/her own free will (column 3), Babbel's terms and conditions stipulate that "the rights granted to the community do not expire upon termination of the user relationship" (point 12.9). Similar clauses can be found in the other two communities. The agreement terminates when a user deliberately deletes his/her account or when a user account remains inactive for a period of six months in Busuu and Livemocha (in Babbel there is no equivalent term).

In short, in reply to the question "what do the terms and conditions of the communities tell us about the way that community administrators consider user data?" it appears that rights are granted to the communities which can access, adapt and modify UGC although it is owned by users, even once a user has left the community. This leads us to ask whether despite

many limitations on ownership and property rights user data can (still) be accessible to a third party, for instance to researchers carrying out analyses in these communities.

4.2. Data accessibility for research purposes

Before discussing data accessibility in a research context, let us first consider data accessibility in general, with regard to the ease of access to any user data. The types of data which are non-disclosed are shown in figures 1 and 2.

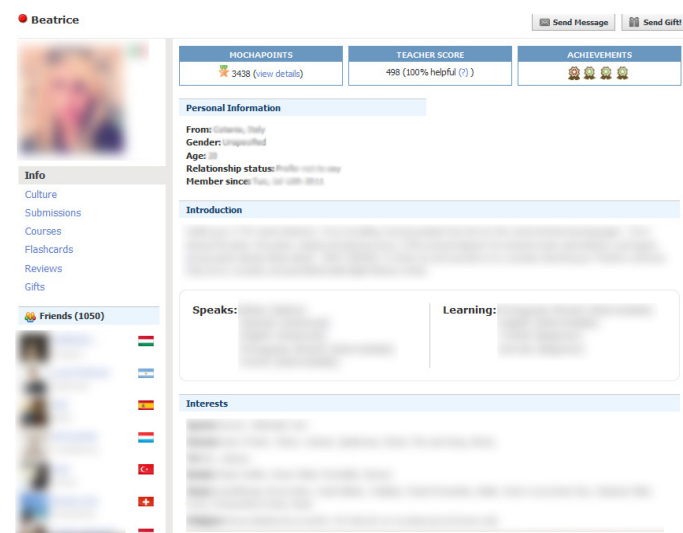Figure 1 data on a user profile, Babbel (left) and Busuu (right)

Figure 2 data on a user profile, Livemocha

The following questions arise: are users offered privacy settings to customize the degree of data accessibility and to protect their personal data should they want to do so? Is it mandatory to belong to one's network of friends in order to access a full

display of another user's data, as a practice preventing unknown/unwanted users from accessing a user profile? Are there some types of data disclosed and others hidden for privacy reasons as default options in the community? Finally, can a user give access to content that he/she creates by sharing it outside the community?

Regarding privacy settings (column 1, table 2), there is no possibility of customising data accessibility among the options a user is given in his/her profile. All user data are unrestricted to any user in the community. Likewise, one doesn't need to befriend someone to access his/her full set of data – a possibility in SNS such as Facebook (column 2) - and there aren't any types of data hidden by default by the community - for privacy reasons - (column 3). Busuu allows users to prevent their profile from appearing in search engines but this option does not affect data accessibility within the community. Therefore, the user complies with the overall privacy policy of the community, which can be summarized in the phrase "all activity is disclosed to any user in the community". This also includes sensitive personal data as shown in figures 1 and 2 such as age (Livemocha), "relationship status" (Busuu and Livemocha), occupation (Busuu), the network of friends and similar data from one's friends (in the three communities).

	Possibility to customize privacy settings	Access to user data of one's network only	Sensitive data not disclosed by default by the community
Babbel	No	No	No
Busuu	No	No	No
Livemocha	No	No	No

Table 2: Degrees of data accessibility in the three communities

To examine the degree of accessibility of user data for research purposes, we look at the terms and conditions and then bring up a recent experience on data access that occurred during the preparation of a research book. Firstly, it is made clear that a user cannot make any use of data without the explicit consent of the community administrators. As an example, in Busuu users are not allowed to "upload, post, email, transmit or otherwise make available any Content that you do not have a right to make available under any law" (point 6f), and by content is meant UGC. What strikes a reader is the sharp contrast between the mass of data (including sensitive personal data) available to any user and the inaccessibility of data for any other purpose

stipulated by the community administrators in the terms and conditions. In practical terms this means that although a user cannot use other users' data, he/she can have a detailed picture of another user's activity in an unrestricted timeframe without any limitation whatsoever. This also means that data exploitation, including for research purposes, is not foreseen.

In general terms, content a user creates cannot be exploited by his/her producer outside the community, in online or offline mode. However, exceptions to the rule occur, as a recent experience shows, during the preparation of the scholar book entitled Social Networking for Language Education that I co-edited with Marie-Noëlle Lamy (Lamy & Zourou, 2013). There is one screenshot from each community in three of the book chapters. As our publisher (Palgrave) required us to obtain the rights to use the copyright protected materials, we contacted the three communities through their generic email address. All gave us access to the material which is now part of the forthcoming book.

Although we were given the rights to use three screenshots, we wonder whether the community administrators gave us authorization only because the dataset was small or whether they are open to research and development involving bigger datasets despite their terms and conditions making such use almost impossible.

Finally, a Ph.D. thesis (Lin, 2012) analyzes the biggest data set of user behaviours in a language learning community, with a sample of 4173 users. Livemocha is explicitly mentioned as having agreed to data exploitation for this Ph.D. Despite the two above-mentioned exceptions (scholar book and Ph.D. thesis), consequences of the situation where (copyright protected) user data is largely inaccessible for research are discussed in the next section.

4.3. Consequences of data ownership and accessibility for research

In this section we first look into the way researchers of scholar work on web 2.0 language learning communities have dealt with property right limitations so far, by reviewing a set of 15 published articles that we are aware of having these communities as object of analysis (Chotel, 2012 & 2013; Chotel & Mangenot, 2011; Clark & Gruba, 2010; Gruba & Clark, 2013; Harrison & Thomas, 2009; Harrison, 2013; Liu et al., 2013; Lloyd,

2012; Loiseau et al., 2011; Pélissier & Qotb, 2012; Potolia et al., 2011 and 2013, Stevenson & Liu, 2010, Zourou & Loiseau, 2013).

The objective is give an insight into the way data ownership and accessibility is understood by CALL researchers carrying out studies in formal and informal online language learning. To do so I address the following questions. Firstly, are the authors of the studies aware of the copyright restrictions of the communities? If so, how do they cope with these restrictions (e.g. by contacting the community administrators to obtain permission to exploit data for research purposes)? Secondly, is there any mention of copyright granted to the researchers, in the form of a written consent (Intellectual Property Rights- IPR-protocol) by users participating in the study?

Among the research papers examined, only one (Lin, 2012) explicitly mentions having obtained the agreement of the community to access and analyze user data for research purposes. However, this study was conducted in close collaboration with a community (Livemocha) and it remains unclear whether participants granted permission to the author directly or whether it was the community administrators that made user data accessible to the researcher since the community owns UGC (section 4.1). The strict majority of authors of the studies mentioned above have opted for data anonymization as a way of non-disclosing user data and as a means of protecting sensitive data from being publicly accessible once the research is published. There is no mention of any contact with the community administrators to obtain access to copyright protected data for scientific purposes.

A possible explanation of the lack of awareness (or even negligence) of the legal framework that governs user online activity in web 2.0 language learning communities may be the culture of CALL research in formal online language learning contexts, that is in contexts designed and monitored by a teacher and/or researcher (cf. section 1). In these studies, data copyright and IPR are mentioned explicitly in (very) few studies. Requesting the explicit agreement of participants in the study is not common, with the majority of CALL peers opting for data anonymization. Therefore, data anonymization is used as a means to protect sensitive user data. Data anonymization prevailing in telecollaborative, teacher-initiated formal online settings is for us a likely explanation of the way CALL researchers deal with data in informal language learning communities. However, the ethics of CALL research on formal and informal language learning and interaction are still not fully addressed, with the exception of Dooly (2013). Considering all the ethical

implications of CALL research, the value of data access is discussed from both a learning perspective and a research and development perspective in the next section.

5. Insights on user data for learning and for research and development

In discussing the way the design of the communities, in terms of data ownership and accessibility, impacts CALL research activity, I bring up two points in the form of conclusive remarks, despite the ethical, pedagogical and organizational issues still remaining open. These points are the value of data/UGC from a learning and teaching perspective and from a research and development perspective.

Value of UGC for learning and teaching

Based on the privacy issues and copyright policies discussed in 4.1 and 4.2, it is a fact that community administrators have the right to adapt and share UGC with the consent of the learner-producer given at the registration stage as a condition of access to the community[4]. In addition, a user grants rights to the community for the whole of his/her activity and cannot re-use part (or all) of it for other purposes. All UGC is stored on the community platform and cannot be extracted by the user who has created it due to copyright restrictions.

I argue that re-use of UGC by the learner-producer is a valuable means of raising and increasing awareness of skills developed through informal learning contexts. Researchers on informal learning have often stressed the overall lack of empirical data giving insight into informal learning practice due to the unconscious character of informal learning and the lack of appropriate methodologies to document it (Schugurensky, 2000; Kukulska-Hulme, et al., 2011; Vavoula, 2007). Demonstration of language learning skills (gained through any type of learning situation including web 2.0 language learning communities) in the form of digital portfolios can help to highlight the learning activity occurring outside formal learning contexts, very often regarded as "second best" due to low visibility and demonstration capacities. Examples of use of digital portfolios

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[4] Accepting the terms and conditions should be a conscious act. However, according to a survey by the Guardian, only 7% of people read the full terms when buying a product or service online, while a fifth say they have suffered from not doing so (Smithers, 2011). In addition, it is confusing for users to grant ownership of their UGC at the registration stage, before they have any awareness of community functions and procedures, types of content, etc.

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in CALL are numerous and well documented (e.g. Shin, 2013). According to Thorne (2013), a digital portfolio can be "embed[ded] in an open and intelligent adaptive environment to fully support the process of student-initiated critical language awareness" (p.7) and can contain "examples of communication in online intercultural exchange partnerships (…) to provide evidence of the ability to successfully communicate under conditions of linguistic and cultural diversity" (p.9).

In the case of web 2.0 language learning communities, this can only happen on condition that a user has full rights to the content he/she creates and that UGC can be extracted in a shareable format, ideally accompanied by a Creative Commons license to communicate any rights reserved. Finally, since it is increasingly common for professional teachers to offer their services for a fee (see Livemocha Tutors or Italki community), a similar approach can be adopted for a teacher digital portfolio that would allow a teacher to demonstrate his/her competencies in peer support, guidance and online tutoring, as all tutoring activity (tasks, lessons, feedback provided, appreciation by learners having received feedback) is available publicly on a teacher profile (see "Exercises and corrections" tab in Busuu, figure 1 right, and "Culture", "Submissions", "Courses", " Flashcards" and "Reviews" options in Livemocha, figure 2). A user online learning or teaching activity in the three communities, can be brought a step further by giving an insight into one's development of digital literacy and language competences and in communicating them to the outside world.

At present, UGC is exploited by community administrators as a means of augmenting and diversifying existing learning materials through the translation of texts by users of less spoken languages where materials are scarce (Loiseau et al. 2011). This is encouraged by game based mechanics (badges, points, awards, etc.) often contributing to crowdsourcing in these communities (Zourou & Lamy, submitted). Although joint efforts in content creation and sharing with community members are valuable, I argue that the shared content one creates in the community with the world outside can be beneficial for learners and teachers and at the same time can reflect the actual role played by UGC in the social networked landscape, namely as a catalyst for a more open, distributed and participatory approach to technology mediated human interaction.

Value of user data for research and development (R&D)

The value of data for R&D will be analyzed with regard to open access to data for research purposes and to access to large data sets (some millions of users in the case of these communities), larger than those used in the studies discussed in section 4.3.

Regarding openness to data in a scientific context, I have pointed out the tension between, on the one hand, unrestricted access to user data to any user in the community (and the absence of the most rudimentary customization of privacy settings) and, on the other hand, the restrictions stipulated in the terms and conditions (4.2.) prohibiting any data re-use, including for research purposes. An analogy can be drawn with the metaphor of "the tower and the cloud" used by Katz (2008) to illustrate the tensions of higher education as a closed sys-tem of knowledge production and sharing in the age of cloud computing. The protectionism surrounding data, as demonstrated by the numerous restrictions imposed by web 2.0 language learning communities, is debatable when considering worldwide trends in education such as Massive Open Online Courses (MOOCs) and Open Educational Resources (OER) which, although neither on the same level nor with the same impact, demonstrate at least some change in the culture of approaching knowledge, skills and literacies.

There is a need for more open, transparent and participatory structures for data sharing and collaborative research, with Chanier (2007) offering a first review of the challenges of open access (OA) offered to CALL researchers. The author advocates free/open access to research findings and in a more recent commentary criti-cizes the commercial interests of research publishing houses impeding OA (Chanier, 2013). An analogy can be made with vested interests in the area of OER that Littlejohn and her colleagues (Littlejohn 2003; Littlejohn et al., 2013) warn against. Research activity is currently affected by constraints on data access imposed by com-mercial companies owning full range of user activity, or what we call large data sets.

Regarding large data sets, research done so far on web 2.0 language learning communities (section 4.3) highlights some aspects of the learning that occurs in these communities. However, due to limited data sets and often inappropriate methodologies, we are far from being able to document processes and outcomes of social network based informal language learning as a collective and dynamic phenomenon. A

more complete picture can be drawn, in which data currently owned by the communities could be instrumental.

Large data sets are not a panacea but a means of gaining a better insight into the multifaceted phenome-non of informal ICT-based language learning. boyd and Crawford (2012) critically approach the question of large data sets (or Big Data according to the authors) and ask whether the quantitative approaches that are al-most exclusively adopted transform the way we study human communication and culture or narrow the palette of research options and alter what research means. The authors claim that "Big Data reframes key questions about the constitution of knowledge, the processes of research, how we should engage with information, and the nature and the categorization of reality" (p.665). I advocate a more thoughtful and pluralistic approach to the conceptual and methodological tools framing informal web 2.0 language learning activity, neither praising strictly quantitative data (boyd & Crawford's concern on Big Data) nor following strictly qualitative analysis, as is the case with the studies published so far. This presupposes a more "overt" collaboration between researchers and community administrators in an R&D perspective. A first step has already been taken in this direction (Dixhoorn et al., 2010). Open questions remain: How will the current landscape of data protectionism evolve in the coming years? How will data openness (or its absence) shape the future of research into ICT-based informal learning?

Acknowledgements

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